

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

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Manufacturers' Record.

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TO FOREIGN COUNTRIES, - - 26s. 6d. a Year.

BALTIMORE, FEBRUARY 18, 1904.

TO OUR ADVERTISERS.

It has been impossible to have all
advertisements exactly correct and
properly located.

Our advertisers, we feel, will ap-
preciate the difficulties encountered
and bear with us until conditions
can be fully met.

The Manufacturers' Record is pub-
lished this week, pending the re-
establishment of The Record Print-
ing House in Baltimore, by George
F. Lasher, of Philadelphia.

Business and news correspondence
should, of course, be sent to the
home office of the Manufacturers'
Record, corner of North and Lexing-
ton Streets, Baltimore, Md.

The Manufacturers' Record has de-
cided to build a new home for its
exclusive use.

The Record Printing House has se-
cured large floor space in a big
warehouse, has made contracts for
complete equipment of presses and
type, and will be in full operation
as quickly as possible.

Advertisements of Southern locali-
ties offering special advantages for
the location of manufacturing en-
terprises will be found on pages
56 and 57.

AN INVESTMENT FOR VIRGINIA.

The Commonwealth of Virginia has opportunity to benefit itself immensely in the passage of a bill now before the General Assembly for an appropriation of \$200,000 to increase the facilities of the Virginia Polytechnic Institute at Blacksburg. It is pointed out by those who are pressing the bill that, as matters now stand, students cannot possibly have the practical experience in shop work which they were able to get before the attendance at the institution had become so large. The Polytechnic Institute is demonstrating more and more every year its value to the State, and has rapidly gained a standing as a technical school, fully justifying the belief that with proper facilities for handling them in class room and in shop it would have within a year at least 1000 students. The \$200,000 desired would be one of the best investments that Virginia could possibly make for itself.

SENTIMENT IN BUSINESS—THE RIGHT WAY TO HELP BALTIMORE.

"There is no sentiment in business" is one of the false proverbs which is constantly heard everywhere. On the contrary, much of the world's business is based on sentiment. Everywhere men will go out of their way to help on business interests from sentiment or friendship alone. Kinship is not more real in its effect upon business interests than sentiment. Sometimes in the hurry of life, in the struggle for success, dormant sentiment is not wakened into activity, but when some great event stirs a community or a country, sentiment becomes an irresistible power. The world stands amazed at the appalling disaster which has come upon Baltimore, and from

every section, as well as from Europe, have come offers of financial assistance. But Baltimore, with a full realization of the staggering blow, knowing full well that with \$150,000,000 of property burned, with thousands of people out of employment and the vast machinery of trade built up during a hundred years temporarily destroyed, appreciating the magnitude of the problem which it faces, believes that it can meet the situation without calling for outside contributions from the millions whose charity would prompt them to pour a vast stream of gifts into our city. With every power, mental and physical, quickened with a grim determination to conquer every obstacle, Baltimore does not ask for alms, but it does ask that the sentiment which has such a strong power in ruling business interests shall make itself felt in not permitting her trade to be taken away because of the temporary inability to promptly meet all requirements. The merchants and the manufacturers who, through many years of honorable dealings have built up a far-reaching trade North and West, as well as South, have a right, in this time of calamity, to ask their customers to be a little patient, and if the necessities of their trade require the quick filling of orders elsewhere, to be ready to come back to their Baltimore friends with enlarged orders just as soon as our people are prepared to handle them. With the immense increase in the wealth of the South by reason of high price of cotton and the consequent enormous expansion of trade throughout that sec-

tion, the merchants of the South could not only arrange to make prompt payment to Baltimore merchants of every outstanding bill, even if not technically due, and every dollar sent to Baltimore now in payment of accounts is worth a hundred dollars given in charity; but that section could, by a generous realization of the power of sentiment in business, send into this city a volume of business which would go a long way toward helping our people to recoup their losses. Every salesman from Baltimore has a right to ask his customers, and to ask those in his territory who have not heretofore been his customers, for the most favorable consideration and the largest orders.

When amid the wreck and ruin of war the South took up its overwhelming burdens, it had a right to ask for every legitimate aid and consideration that the business men of America could give its merchants, and Baltimore, identified by geographical lines as well as by closer kin, did its full share to the utmost of its ability in helping the South to weather the storm. Ever since then its money has freely gone into the South for investment in railroads, in industrial enterprises, in municipal securities, in trade and in building operations. The ties between Baltimore and the South have yearly grown stronger, and because the Manufacturers' Record is not a local paper, but a Southern paper—a paper that has for nearly a quarter of a century sought to speak for the whole South and not for Baltimore alone, and because it was not among the severe sufferers by the fire and therefore has no serious permanent losses to face, it can say to the South, as no purely Baltimore paper could, that now is the South's supreme opportunity to show that with its people at least sentiment does control business, and based on that pour into this city such a trade as will tax the ability of our merchants to handle. Baltimore asks no charity, but for the people of Baltimore, that their losses may the more quickly be recouped and that the thousands of men thrown out of employment may the sooner be saved from dire want, the Manufacturers' Record, the exponent of the whole South, does make this plea to the South, as well as to all other sections.

BALTIMORE'S FIRE-PROOF SPIRIT.

When the historian shall come to deal with the United States in 1904 and shall scan the newspaper files covering the week of February 8-14, he cannot fail to be impressed with the fact of the fundamental unity of the American people. The fire disaster at Baltimore made that manifest, and it was recorded on the editorial pages of newspapers reflecting real public opinion in all parts of the country. On the instant of the first news of the fire, which naturally suggested want and suffering in mid-winter, sympathy of the tenderest sort was tendered, and along with it came the call by their respective newspapers upon hundreds of communities, large and small, for substantial aid for Baltimore. In New England the practical question was put forth, "How much are you sorry?" In the Middle States was the statement that if Baltimore finds its "burden heavier than she can bear she has only to say the word and the rest of the country will come to the rescue." A typical expression in the West was that "whatever material aid Baltimore needs she can depend upon Chicago as a more than willing giver," for "the debt that Chicago owes to the Baltimoreans of a generation ago will be gladly repaid in accordance with Baltimore's need to-day." In the South, of course, the genuine sorrow at the plight of the city was strongly shown, and in a number of cities the newspapers led in measures for the immediate relief which at distant points was thought to be necessary. The point was made that no section would feel Baltimore's loss more keenly than the South, inasmuch as it is the centre of Southern financial operations, and the city and the section are in such close and family touch. Again, the prompt assistance given by Baltimore to other stricken communities was recalled in many ways in proof that the South is not unmindful of the fact that, "the prosperity of Baltimore has ever meant the prosperity of the South," and that her hand has always been outstretched to assist in the tremendous work of rehabilitating this section and of making the great, the wonderful South of to-day. These are but a few specimens of the several hundred editorial utterances indicating clearly, as one paper put it, that "Baltimore will find that the words of tender sympathy which have been so generously said in all sections are not the mere expression of passing emotion."

But on the heels of the disaster was published the news that, however little even some modern structures of the city might be unable to withstand the wave of furnace heat, the spirit of Baltimore is fire-proof. With great wholesale houses arranging to take up their trade even before the streams of water had ceased playing upon their ruins, with financial institutions announcing their readiness to transact business, even before they were assured that the contents of their vaults

were intact, with wonderful promptness on the part of local authorities in clearing the debris from the main thoroughfares throughout the burned district, with contracts speedily made by firms and individuals for the reconstruction of their buildings upon improved lines, in the meantime announcing their temporary locations, and with the determination on the part of State and municipal authorities and of the people as a whole, deeply grateful though they were for the tenders of assistance from thousands of sources elsewhere, to depend upon their own resources for recovery from what at first seemed to be a paralyzing blow, another note was sounded by the press of the country, a note of exultation that Baltimore was vindicating her traditions and that the indomitable pluck which has made this nation was being displayed in Baltimore, as "beneath a blow that might well stagger the strongest she stands serene, confident and courageous." Then the argument was that Baltimore is no city to succumb under a blow, as she possesses within herself the solid foundations of prosperity and has the courage to take advantage of them, and that the courage, the faith, the skill, the immense reserve power and the unity of purpose of the people of Baltimore brought to the front by such adversity had excited the admiration of the nation, and prediction was freely made that from the ruins will rise a more beautiful and more potential business community. Backing this argument were the statements that the city's business rests upon the sound basis of an immense trade and a magnificent harbor, that the indomitable spirit that has made it one of America's principal cities will assert itself, that the energy, the thrift and the business wisdom which have made the city a great financial and commercial power are not destroyed, but will be reassured for greater things, and that the people of Baltimore, resourceful, hopeful, conservative, courageous and ambitious, are of the kind who will not sit down to mourn in the ashes of their ruined fortunes, but, made of stuff too stern to quail under any calamity, had risen superior to destiny and taken up practically alone the burden of building anew the great metropolis.

Two or three suggestions from among the many editorials should ever be borne in remembrance. One was in a Northern paper to this effect:

The most serious inconvenience will, no doubt, come from the derangement of business arising from such a catastrophe, and it is just here where Baltimore's merchants will need and should receive most consideration. Bankers and merchants, buyers and sellers from every quarter should extend their sister city a strong and patient hand.

Another was in a Southern paper. It reads:

In consideration of the South's deep obligation to Baltimore—which is, in fact, a Southern city—Southern merchants who have heretofore done their buying there might well be patient until the city is ready to do business again, or, if they must buy elsewhere in the meantime, hold themselves free from permanent alliances in other places; and those who have not heretofore bought there might well try that market when it is rehabilitated, to learn if it does not offer them advantages equal to those of other cities.

Complementary to this was the advice given by a Richmond paper:

It is a practical question for serious consideration whether the wholesale people in Richmond can arrange with the Baltimore people to assist in taking care of this trade, prevent the breaking off of its connections with Baltimore and hold it for the South. It might be an extreme and quixotic stretch of generosity to offer Baltimore the tem-

porary use of what warehouses and storage facilities we have here for the accommodation of her trade until her own wholesale district can be restored, but something in that direction might be done.

These are evidences of a practical sympathy before which Baltimore succumbs in gratitude.

EXPORT TRADE OF THE SOUTH.

An analysis of the statistics of the foreign commerce of the United States for the past two calendar years shows how largely and increasingly the South contributes to the nation's trade with the outer world. In 1903 the exports from south Atlantic and Gulf ports amounted to \$542,341,661 in value out of a total of \$1,484,681,995 for the entire country. In 1902 the same Southern ports handled \$447,241,866 out of \$1,360,705,935 for all ports. In 1901 the share of the South in the nation's export trade was \$499,832,472 out of a total of \$1,465,375,860. The exports from Southern ports in 1901 were equal to 34 per cent. of the total, 33 per cent. in 1902 and 36 per cent. in 1903. It is worthy of note that out of an increase of \$123,976,060 in the total exports in 1903 as compared with 1902, \$95,099,695, or nearly four-fifths, was credited to Southern ports.

The following tabular statement shows the value of the exports through each of the Southern ports during the past three calendar years:

| PORTS. | 1901. | 1902. | 1903. |
|----------------------------------|---------------|---------------|---------------|
| Baltimore | \$90,044,936 | \$74,364,226 | \$84,347,278 |
| Beaufort, S. C. | 166,149 | 204,819 | 145,035 |
| Brunswick, Ga. | 8,808,900 | 7,871,314 | 9,338,886 |
| Charleston | 4,190,851 | 5,320,029 | 3,468,986 |
| Fernandina | 2,557,191 | 3,183,550 | 5,622,979 |
| Newport News | 34,458,256 | 29,901,150 | 20,521,051 |
| Norfolk and Portsmouth | 10,128,044 | 6,585,212 | 8,686,785 |
| St. John's, Fla. | 211,893 | 297,390 | 274,214 |
| Savannah | 44,166,295 | 47,671,951 | 58,565,372 |
| Wilmington, N. C. | 9,676,334 | 14,814,636 | 19,775,069 |
| Total South Atlantic | \$213,408,849 | \$190,124,277 | \$210,745,655 |
| Appalachicola | \$295,907 | \$229,311 | \$304,601 |
| Galveston | 107,279,172 | 94,057,543 | 144,355,883 |
| Key West | 800,708 | 509,811 | 668,533 |
| Mobile | 11,893,435 | 11,989,917 | 15,146,504 |
| New Orleans | 147,782,416 | 132,277,049 | 149,671,926 |
| Pearl River, Miss. | 2,397,009 | 2,164,671 | 3,325,371 |
| Pensacola | 14,393,300 | 13,953,703 | 15,822,589 |
| St. Marks, Fla. | 1,581,676 | 28,021 | 901,944 |
| Tampa | 1,817,563 | 1,391,275 | 7,284 |
| Total Gulf | \$286,423,623 | \$257,117,589 | \$331,506,006 |
| South Atlantic | 213,408,849 | 190,124,277 | 210,745,655 |
| Grand total | \$499,832,472 | \$447,241,866 | \$542,341,661 |

A further study of the exports through the different Southern ports in 1903 shows some interesting phases of the foreign commerce of the country. Out of \$48,848,045 worth of corn, which the South does not grow for export, \$21,711,162 worth went out through Southern ports. Of wheat—not a Southern crop—\$27,935,120 worth out of a total of \$59,168,992 was exported via Southern ports. Flour to the extent of \$27,241,118 out of a total of \$74,208,400 found its way abroad through the seaports of the Southern States. Taking the whole group of breadstuffs, the South exported last year \$73,038,414 out of a total of \$192,920,266, nearly all of which consisted of products of the Middle West and Northwest.

These same Southern ports in 1902 exported \$63,751,997 out of a total of \$187,381,225 worth of breadstuffs. While the total exports of breadstuffs increased only \$5,609,041 in 1903, the share of the Southern ports in this trade increased \$14,236,417. Galveston, for instance, jumped from \$9,155,090 to \$19,902,154, and New Orleans increased from \$15,771,271 to \$21,322,056. Baltimore, New Orleans and Galveston stand respectively second, third and fourth among the grain-shipping ports.

Of cotton, exclusively a Southern product, about 90 per cent. is exported direct from the South. Out of a total of \$221,741,957 exported since the be-

ginning of the crop movement on September 1, 1903, \$197,193,408 went from Southern ports. This great Southern staple is by far the largest item in the entire list of exports, amounting in 1903 to \$378,573,628 out of a total export of \$1,457,575,865, or over 25 per cent. of the aggregate foreign shipments.

The past ten years have been a period of great development in the export trade of the South, and several of the leading Southern ports have outstripped all other ports of the country in the rate of their progress. A few comparisons of the principal seaports, with their exports at the beginning and end of the decade, will show this:

| | 1893. | 1903. |
|------------------------|--------------|--------------|
| Baltimore | \$74,830,312 | \$84,347,278 |
| Brunswick | 3,168,069 | 9,338,886 |
| Fernandina | 1,453,864 | 5,622,979 |
| Newport News | 10,547,265 | 20,521,051 |
| Savannah | 23,535,847 | 58,565,372 |
| Wilmington | 7,420,828 | 19,775,069 |
| Galveston | 35,957,550 | 144,355,883 |
| Mobile | 3,301,031 | 15,146,504 |
| New Orleans | 85,215,773 | 149,671,926 |
| Pearl River | 904,676 | 3,325,371 |
| Pensacola | 3,737,384 | 15,822,589 |

These eleven Southern ports contributed about \$275,000,000 to the \$600,000,000 which has been added to the export trade of the country since 1893. Outside of New York, no port of the country has shown such an increase of exports in the past ten years as the \$108,000,000 at Galveston or the \$55,000,000 at New Orleans or the \$35,000,000 at Savannah.

| PORTS. | 1901. | 1902. | 1903. |
|----------------------------------|---------------|---------------|---------------|
| Baltimore | \$90,044,936 | \$74,364,226 | \$84,347,278 |
| Beaufort, S. C. | 166,149 | 204,819 | 145,035 |
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| New Orleans | 147,782,416 | 132,277,049 | 149,671,926 |
| Pearl River, Miss. | 2,397,009 | 2,164,671 | 3,325,371 |
| Pensacola | 14,393,300 | 13,953,703 | 15,822,589 |
| St. Marks, Fla. | 1,581,676 | 28,021 | 901,944 |
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| Total Gulf | \$286,423,623 | \$257,117,589 | \$331,506,006 |
| South Atlantic | 213,408,849 | 190,124,277 | 210,745,655 |
| Grand total | \$499,832,472 | \$447,241,866 | \$542,341,661 |

The export trade of the South is bound to increase steadily, not only as the products of the South increase but also as the products of the great Mississippi Valley and its tributary territory find their natural outlet through the Gulf of Mexico. With the opening of navigation across the Isthmus of Panama, and the shortening of routes to the Orient and the Pacific ports of the Americas, there will come still more rapid progress to the foreign commerce of the South.

RAILROAD EARNINGS IN THE SOUTH.

The statements of a number of railroad companies in the South and Southwest for December display continued increases in both gross and net earnings,

showing that gratifying business conditions prevail there. The Atlantic Coast Line exhibits an increase of 31.5 per cent. in net earnings; the Nashville, Chattanooga & St. Louis, 1.9 per cent.; the Central of Georgia, 23.9 per cent.; the St. Louis Southwestern, 73 per cent.; the Atlanta & Charlotte Air Line (part of the Southern Railway), 35.9 per cent.; the Yazoo & Mississippi Valley (part of the Illinois Central System), 18.7 per cent. All these roads also displayed increases of expenses except the St. Louis Southwestern, on which there was a small decrease. In the case of the Chesapeake & Ohio, although there was a good increase in

gross earnings, there was a decrease of 7.8 per cent. in net earnings because of a large increase in expenses; the same conditions applied also to the Norfolk & Western, which sustained a decrease in net of nearly 4.5 per cent.; the Louisville & Nashville, owing to similar conditions, also shows a very slight decrease of .2 per cent. in net earnings. It is to be noted that in the case of the Chesapeake & Ohio and also of the Norfolk & Western considerable money has been expended on maintenance and improvements, thus increasing the cost of operating for the time being.

A closer understanding of what the companies are doing is attainable by their figures for the last six months of 1903.

For this period the following increases in net earnings are shown: Atlantic Coast Line, 17.5 per cent.; Chesapeake & Ohio, 32.6 per cent.; St. Louis Southwestern, 14 per cent.; Norfolk & Western, 13 per cent.; Louisville & Nashville, 3 per cent.; Atlanta & Charlotte Air Line, 5.1 per cent.

This brief glance at what a number of representative companies are doing indicates the character of railroad conditions in the South, which, as shown by the figures, is quite satisfactory, some of the gains being especially gratifying, with every indication that net earnings will generally continue to display increases for some time to come at least.

COMMERCIAL ASPECTS OF THE WAR.

With the opening of any international conflict, such as that in which Japan and Russia have just engaged, the commercial aspects of the war are apt to receive first consideration, especially among the third parties. Our merchants and manufacturers already are trying to figure out just how they are likely to gain or lose by the war in the far East. A careful study of the situation, however, leads to the conclusion that American interests will be affected in small degree by this disturbance.

Our own war with Spain put a vast amount of money into wide circulation, and gave decided impetus to many branches of industry. England's conquests in Africa, both South and North, have brought more or less additional trade to American interests with both profit and prestige. The internal struggles of China was a larger loss than gain in its immediate results, for the closing of that great market for American cotton goods more than offset any small increase of business which the war may have brought to other industries.

It is evident that all foreign trade will cease at the seaports of Asiatic Russia; and whatever business American interests may have had at Port Arthur, Dalny or Vladivostock will be cut off entirely for the time. Our trade at these ports, however, is but a few millions per year, since the Trans-Siberian and Chinese Eastern Railways have been practically completed, so that this loss, or rather suspension, of trade will not be of importance in the great aggregate of our foreign business.

China is pretty sure to be kept outside of the zone of trouble, and there is no reason for any interference with our trade in that quarter. As neither Japanese nor Russian shipping carry

American goods to China to any extent, there should be no danger of interference by either participants in the present war.

A considerable portion of our exports to Japan is carried in the vessels of that nation from Pacific Coast ports. Of course the ocean commerce of the participants in any war is always supposed to be at constant risk; but if the early events of this war be any basis from which to judge, it seems probable that the Russian navy will be fully occupied in self-protection and will have no time to molest the merchant ships of Japan.

Exports from the United States to and imports from Japan during the past three calendar years have been as follows:

| | Imports. | Exports. |
|------|--------------|--------------|
| 1901 | \$36,854,692 | \$21,162,477 |
| 1902 | 40,597,582 | 21,622,603 |
| 1903 | 45,510,768 | 20,874,887 |

The only item in this trade which directly concerns the South is cotton, which represents a large part of the exports from the United States to Japan. Of late, however, there has been a great shrinkage in this item—over 50 per cent. last year. In the calendar year 1901 the exports of American cotton to Japan amounted to 137,983 bales, valued at \$7,482,374; in 1902 the shipments were 176,448 bales, valued at \$9,275,804, and last year there was a drop to 83,434 bales, valued at \$4,448,430.

The other two important articles of export to Japan are flour, which amounted last year to \$4,685,045, and kerosene oil to the value of \$3,567,905. The flour goes chiefly from Pacific ports—Puget Sound, Willamette and San Francisco—and is the only article in our trade with Japan which might be considered as contraband of war. The seizure of cargoes of American flour and provisions by the British during the Boer war resulted finally in the establishment of the principle that food or coal could not be considered as contraband unless supplied to the belligerents. There is no ground under this decision for interference with the shipments of flour to Japan, unless intended directly for military use. Under any circumstances, however, there is little reason for apprehension of interference with American commerce on the part of Russia.

On the other hand, the presence of a great Russian army in Manchuria, Corea and Siberia will necessitate a continuous supply of food stuffs and fodder. The delivery of all that is required to sustain these troops by way of the Trans-Siberian Railway will be a matter of much difficulty, and the delivery of provisions from the United States by water will be menaced if not prevented by the activities of the Japanese fleet.

While in progress, the Russo-Japanese war is not likely to cause much gain or loss to American commerce; but its final results will be of more importance, not to the United States alone but to the whole world as well. The final outcome of this conflict will probably be the definite determination of the various spheres of influence in the disputed territory, with consequent benefit to the entire commercial world.

In a letter to the Manufacturers' Record, Mr. F. J. Merriam, of Atlanta, Ga., who is a practical farmer and editor of the Southern Ruralist, writes regarding a recent editorial urging Southern farmers not to neglect corn and other crops for cotton as follows:

I am just in receipt of a copy of your

January 18th issue, and desire to express my appreciation of the position you take in regard to the present cotton situation in your editorial in that issue. You are exactly right in your position that our farmers are in danger of planting too large a crop, in fact, more than they can gather successfully, as in all probability we shall have a good crop year.

FOR SOUTHERN PUBLICITY.

Mr. S. H. Madison, of Des Moines, Ia., who with the other men of that State is interested in Southern lands and their proper development, said at New Orleans the other day that there are tens of thousands of persons in other parts of the country who would settle in Texas, Louisiana, Mississippi or Alabama if they were but fully acquainted with the great resources of those States. He said that millions of dollars of Iowa capital has sought investment in Louisiana and Texas, in the lumber industry, in the oil fields and in other lines, but that many other millions should be invested. He added:

Already people all over the country are talking about the South and the Southwest. Many things have contributed to this. The great success that was met with in rice culture brought that prominently before the people of the world a few years ago. Even before that the Southern States were famed for their great wealth in sugar and cotton. The great bull movement in cotton of last summer that sent prices soaring directed the eyes of the world to the South and particularly to Louisiana. All these things have helped, but without efficient organization it would not have been possible to accomplish these ends or to have spread knowledge of them. Now other things have come to the front. The Southwest has attained a just fame as possessing some of the richest oil fields in the world. Then other agricultural products are being brought forward prominently. Tobacco-growing in Louisiana and Texas is among these. The tobacco grown in St. James Parish, Louisiana, has long been famed, but within the last year it has been proven that tobacco can be grown in other parts of the State, and Texas has also successfully demonstrated the practicability of growing the weed in that State.

With all these natural advantages a great development all through the Southwest must necessarily follow, but this development can be greatly helped by organizations that will encourage capital to seek investment here and spread a knowledge of true conditions for the benefit of both homeseekers and investors. The best immigrants are those who go to a new country with the intention of remaining there and at the same time have sufficient capital to go into business for themselves. They must necessarily be put in the first class, but other classes are also desirable. Investors can be brought here and interested in the country good point is gained even if they make their residence elsewhere. If homeseekers come and settle on the lands of other people, either working for those people or paying rent for the lands, they are desirable so long as they are good and industrious citizens.

Already there are two strong organizations working together to the very end suggested by Mr. Madison; the one, the New Orleans Progressive Union, a body of energetic and alert citizens who have demonstrated their value to the community of New Orleans in a commercial and industrial way; the other, the Four States Immigration League, especially devoted to the task of attracting desirable immigrants. Both of these bodies are young, but their vigor and practical mindedness have already opened the way for most substantial results, and have set an example for individuals, cities and States to follow if they would surely prosper in the measure of their potentialities.

In the first six weeks of this year the aggregate value of the zinc and lead output in the Joplin district was \$1,104,035, the million-dollar mark having been reached a week earlier than in 1903.

THE SITUATION IN BALTIMORE.

Baltimore has resumed business. It is true that at no time did it entirely stop business because of the great fire of February 7th to 8th, though there was a practical suspension of it in many essential lines. But within ten days after the catastrophe and before the flames have entirely burnt themselves out in parts of the devastated section the city has so met the situation as to warrant the conviction that its trade will be within an almost incredibly short time following its usual channels and in greater volume. Many factors have contributed to this end. A most important one is the financial situation. There has been, of course, an enormous loss of actual currency in the aggregate, through the destruction of individual or office safes in which it had been placed, but the fact that the vaults of all the national banks, the savings banks and other financial institutions were found to be intact with their contents was a decided backing for the buoyancy of spirit with which the people of Baltimore faced the disaster. It is said, indeed, that no depositor in a Baltimore bank will lose a penny by the fire. The readiness with which such bodies as the clearing-house committee of New York met in practical wisdom the question of the legal holiday declared for Maryland by Governor Warfield and the promptness of the general government in moving to Baltimore coin and notes to meet every demand of the national banks added immensely to the feeling of security for the present and hopefulness for the future. On Monday, February 15th, the first clearance between the banks since Saturday, February 6th, materially helped the business situation. The clearings, naturally heavier than usual, aggregated \$8,800,000, and the excess of credits over debits amounted to more than \$1,000,000, showing the splendid condition of the banks, more than half of the number of which are occupying temporary offices. On Monday, too, the different savings banks resumed business and all reported that deposits had been made during the day. The experience of the largest in the city, having more than 25,000 depositors and assets aggregating more than \$25,000,000, was characteristic of the experience of all. This institution which, by special arrangement with the municipal and judicial authorities, has its quarters in one of the offices of the Court House, received a number of deposits, and the withdrawals from it were in lots of from \$5 to \$100, to meet the ordinary requirements of depositors. At no time were there more than 25 persons in the bank. This institution, like the great majority of those in the city, had abundant currency on hand and its funds are invested in gilt-edged securities beyond even the reach of such a conflagration as Baltimore's.

There is no apprehension that the supply of money for immediate use in Baltimore will be inadequate to the needs. In the sub-treasury there are now more than \$15,000,000, an amount greater, in the judgment of the Baltimore Clearing House than is necessary for the probable business demand, but as soon as Secretary Shaw was advised of the situation he did everything in his power to simplify it, and to make possible direct shipments of large funds to pay all deposits that may be at other sub-treasuries to the credit of Baltimore banks, it was arranged for payments to be made by wire through the treasury at Washington.

The great wholesale houses of the

neighborhood where the fire started have found new temporary locations, their salesmen are on the road, train loads of stock are on the way to Baltimore and, generously aided as they have been by the manufacturers' agents and by their own customers, they will hardly, it is believed, find it necessary to avail themselves of the suggestion that ordinarily competing cities should, for the time being, temporarily take care of Baltimore's trade, not only in dry goods, drugs and notions, but in other lines. Before sunset on Sunday one of these great dry goods firms had made a handsome offer for the lease of a large building just on the edge of the burned district. Representatives of another, which has been fortunate enough to secure quarters in the Fifth Regiment Armory, were in New York city shortly after Sunday midnight arranging for new stock of goods, and so it has been all along the line.

With the destruction of about 2500 buildings it is probable that between 5000 and 6000 firms had to seek new offices. These are scattered as far as a mile and a half from the scene of the fire, for, while it was still burning, dwellings, public buildings of all kinds, including the Young Men's Christian Association, vacant school-houses and churches and other structures were receiving the office outfit rescued from the flames, or the desk and chair with which many a Baltimorean was obliged to begin business anew on Monday morning. At the same time hundreds of representatives of the leading mercantile establishments were hastening to New York, Philadelphia and other points to make arrangements for carrying on business without material interruption. It is doubtful if any city ever met a great emergency with such phenomenal promptness, energy and activity as Baltimore has, the demonstration being in the column after column of one-line announcements of temporary locations published in the local papers. Some business men, indeed, who had never been known as great hustlers, but had been content to move with conservatism and caution, were roused into quick and vigorous action, and by early Monday morning, when the fire had swept from the financial and mercantile section toward the wharves, no time was lost in watching its destruction of other property, but everywhere arrangements were being made for office room and for providing the facilities for immediate work.

While the water-front on the north side of the harbor, for about three-quarters of a mile, was swept and the docks and sheds of coastwise steamers were destroyed, a great stretch of water-front escaped and the export wharves, the grain elevators and the oil terminals, with the coal docks were not touched, so that the foreign trade of the city will go on without interruption, only temporary hampering being occasioned by the loss of office room of many shippers nearer the center of the city.

The great manufacturing plants of the city, with few exceptions, also escaped damage, and consequently the potentialities of Baltimore financially, commercially and industrially are as they ever were, and under the influence of the spirit which has been so signally displayed by citizens in all walks of life, are bound to be realized more fully, perhaps, than if the fire had not occurred.

Nevertheless, Baltimore understands fully the tremendous loss that it has incurred and is not disheartened at the burden which has fallen upon it. It

knows that the burnt district must be restored as speedily as possible and it is determined to do all within its power to seize the opportunity created by the utter destruction of so many buildings fronting on the narrow down-town streets for making improvements there long contemplated and discussed, but postponed, as it seemed, indefinitely, by the prospect of the cost of removing buildings. The three blocks occupied by the City Hall, the temporary Custom House, the Post Office and the handsome marble Court House escaped destruction, it is believed, only through the shifting of the wind at a vital moment, the last-named building, it is true, having been injured to the extent of \$50,000. The plan of widening the streets about the important structures and of giving them a front of parking, adding to the effectiveness of their architecture and insuring them against fire, has now a hundred supporters to one two weeks ago. The necessity for prompt removal of brick and stone and iron works rendered practically useless for structural purposes has given at the same time an impetus to the movement for an improvement of the water front by filling in a portion of the basin, a harbor good enough for the city's uses a hundred years ago, but now congested and in summer likely to be a menace to the health of low-lying portions of the city. It is thought, too, that the freedom with which work may be now done will facilitate the carrying out of the design for a modern sewerage system and for street improvements. The money for these undertakings is expected to be put in circulation through the city treasury, and in the case of the federal buildings, including the \$2,000,000 Custom House in course of construction, through the national treasury. These are but the leading items in the plan for beautifying the city and for taking advantage in every possible way of wresting success from the fire disaster. Out of the wreck and ruin there will come a new and greater city, stronger and more energetic men and a closer union of all classes in the community. The work of rebuilding the burned section is attracting the attention of leading architects, engineers and contractors in different parts of the country, who are hastening to take part in the great task. It is recognized that as quickly as the ruins may be cleared and reconstruction work begun warehouses and office buildings, banks and other structures, costing in the aggregate not less than \$100,000,000, will be under way. It is the most gigantic work of this character ever undertaken and promises to surpass in many respects the rebuilding of Chicago. But the merchants and manufacturers, the financiers and the municipal authorities are fully awake not only to the importance of maintaining the control of the trade which has for years centered here and of increasing it, but also to the necessity of utilizing this occasion for expansion on many lines. Quickened with the determination to conquer all difficulties, they will no longer be content with the business which the city has already gained, but with a spirit and energy borne of the trials through which they have passed, they will push out for still greater achievements.

In the meantime, the country should fully understand that, though somewhat hampered and restricted by the lack of former facilities, the drawbacks are but temporary and that the whole city is at work to reduce as much as possible the time of its embarrassment. The situation is well summed up in the words of

a sub-committee on financial information made a day or two ago to the Citizens' Emergency Committee:

"While a great loss has fallen on the business district, it is largely or wholly

covered by insurance. Our municipal buildings were saved. There is no reason for any loss of trade to the city. Our merchants have secured temporary quarters and business will go on."

Widely Ramified Influence of Cotton

Mr. John M. Parker, one of the leading cotton planters of the South, as well as one of the largest cotton merchants of New Orleans, intimately identified for many years with every phase of the growing and handling of cotton, a careful investigator of seed and soil and of everything else bearing on cotton, in an interview discussing the questions raised by the MANUFACTURERS' RECORD, said:

"The great financiers and students of political economy in this country do not seem to have given the cotton industry the careful attention and study it merits. Few realize that an absolute crop failure would mean disaster not to the South alone, but to every section from the Rocky Mountains to the Atlantic in this country, and to the world at large. The mills of the East and South, employing in the aggregate about half a million people outside of the many thousands indirectly connected with the industry, are entirely dependent upon the cotton of the South, with the exception of a few thousand bales of Egyptian cotton used for special purposes. The mills of Europe, employing directly and indirectly four or five times as many people as the mills of this country, are almost wholly dependent upon the South's staple, since 80 per cent. of the cotton crop of the world is produced in this section. A large crop means general prosperity to Western farmers, stock-raisers, manufacturers of agricultural machinery, banks, insurance companies and transportation companies, and, in fact, to nearly every branch of commercial and agricultural interests, for all the trade and traffic of the great West is closely identified with the cotton interests of the South. The farmers of the Delta sell everything they raise and buy from other sections of this country everything they use, thus creating for the West a vast market for all of its products.

"Cotton represents 41 per cent. of the value of our agricultural crops, and maintains the balance of the world's trade in our favor. It is the one product in which American supremacy is assured, though every great nation is making strenuous efforts, through colonies or dependencies, to cultivate cotton, hoping to avoid their present dependence upon the American crop. Mr. Charles S. Fairchild, former Secretary of the Treasury and now one of the great financial leaders of New York, very tersely stated to the River and Harbor Committee of Congress a few days ago, in discussing the importance of the proper leveeing of the Mississippi river, that 'the cotton crop and its relation to the financial and business conditions of our country is of more importance than the Isthmian Canal.' Such a statement from so distinguished an authority is food for earnest reflection. The vastness of the interests at home and abroad, illustrated by the worldwide discussion now going on as to cotton and the efforts which are everywhere being made to develop cotton-growing in other countries, should impress upon every one the supreme importance of the cotton crop, and cause them to realize that this is in no sense a sectional crop, but rather that it goes even beyond national lines and becomes an international crop, more far-

reaching in its effect than any other single crop of any country in the world.

"There have probably been fewer changes and less improvement in cotton planting and cultivation than in any other agricultural industry, and the system is practically the same to-day as before the war, with two or three marked exceptions. The negro labor is far less efficient than prior to 1860, due to their improvident, shiftless habits and the fact that from their manner of life and lack of nourishing food, which they will not provide for themselves even when abundantly able, they are physically weaker, and it is conservative to say that 75 per cent. of them are diseased. It is true that outside of the Delta country, pre-eminently adapted as it is for the negro, the proportion of the crop raised by whites is every year increasing, but the demand for labor, both of the negro and the white, in industrial pursuits—mining, manufacturing and railroad work—has drawn so largely upon the supply that there is a growing scarcity throughout the entire South. I very seriously doubt whether, under the most favorable conditions, it would be possible to pick over 11,500,000 to 12,000,000 bales of cotton, at the outside, until we have devised some way to very greatly increase the labor supply on the farms. There are some who believe that the higher prices of cotton will bring back into agricultural pursuits a great many who have been drawn away into industrial work, but I question the correctness of this position. It is true that some few may come back to the farms, but their number is limited, and one of the pressing problems confronting the South, and one of vital interest to the world, is how to increase the agricultural labor supply in the cotton regions. I see no other way of accomplishing this with sufficient rapidity to meet the necessities of the case than by a very large foreign immigration. The tendency of population from the West and North, it is true, is southward, and a great many farmers are settling all over the cotton region, but they are not yet in sufficient number to materially alter the situation, and what we need is men who will do the rougher work and for the time being become employees of these Western farmers as well as of Southern farmers. In Louisiana and Mississippi we have tried with very great success the Italians. Many thousands of them have come into the South through New Orleans, and wherever they are working on the cotton plantations they are proving themselves most efficient laborers. Some Scandinavians have also been used to advantage, but the number of all foreigners ought to be multiplied many times, and instead of a few thousand a year we ought to be getting several hundred thousand a year. The increasing demand throughout the world for cotton makes it almost a necessity for the South to produce 14,000,000 or 15,000,000 bales of cotton a year within the next five or ten years. This is impossible without a very great increase in the supply of labor. The cotton mills of New England, of the South, and of Europe, are just as deeply interested in turning the tide of foreign immigration into the South as are the cotton planters.

"Another very serious drawback is the question of deterioration of seed. The old-time planter carefully saved and preserved his best seed, putting the balance back on the land as fertilizer. Now the oil mills are eager purchasers for the early seed, and at full prices. A careful examination of many planting seeds will show a large percentage immaturely developed, from which no strong and hardy plant can be expected. Thousands of acres, year after year, are replanted in cotton, the soil becomes exhausted, and both the quantity and quality of the yield are disappointing. You might as well plant 'nubbins' and expect to get good corn, or breed scrubs and expect to get shorthorns, as to plant immature and undeveloped seed and look for a good cotton crop. The vigor of the plant in its reproductive power is expressed in the first maturing bolls, the seeds of which are much better and much more likely to give a strong and healthy plant. The importance of exceeding care in the selection and the planting of seed is illustrated by the operations of Mr. J. H. Allen, of Port Gibson, Miss., and the wonderful record which he has made in this way—a record which has made his cotton known throughout the world. Even when the planter selects and gives to his negro tenant good seed he is not always certain, unless he watches the matter, that they are planted. I have known a negro tenant to whom a bag of very carefully selected seed was given, to sell it for enough to buy two bags of inferior seed, planting one bag and selling the other, and figuring that he had made a sharp deal, ignoring the fact that the inferior seed could not possibly produce a good crop.

"On this point I would offer the following suggestions: Farmers should save their planting seed from their earliest and best-fruited plants. These seeds should be carefully developed from year to year, and then the result will more than repay the extra care taken. The crops should be rotated with corn and peas or clover at least every third year, and in order to be independent of seasons, ditches should be dug deep and good drainage secured. On my plantation of 4000 acres in Bolivar county, Miss., I make a rule to have at least one-third of the cultivated area in corn and peas every year, and in that way in three years make a complete rotation.

"The United States Agricultural Department has the names and addresses of every ginner in the country. Every one of them should be kept posted by the department in regard to new varieties of cotton and new systems of cultivation as shown by the results of experiments, and thus let the farmers who are in touch with the ginners secure the benefit of the experiments and research of the department.

"It is important, too, to impress upon the nation the imperative duty of the government to take charge of the levees of the Mississippi river, and by insuring safety from overflow open up for cultivation 15,000,000 acres of the richest agricultural land upon this continent. This land, capable of producing a bale of cotton an acre, could, when fully settled up (and a guarantee of protection by the government from overflow would bring it into almost immediate cultivation), be made to yield almost as much cotton as the present crop of the country. It is estimated that an expenditure of about \$20,000,000 within the next four or five years would complete the levee system, and how trifling this cost is may be realized when it is understood that under cultivation the reclaimed land would yield anywhere from \$400,000,000

to \$500,000,000 worth of cotton a year. The people of Mississippi and Louisiana and parts of Arkansas have taxed themselves to the utmost in this levee work. In some sections they have taxed themselves as high as 17 per cent. a year on the assessed value of the property, or over \$5 per acre on land assessed at \$30. They have laid a tax on every bale of cotton and every barrel of rice, on every bag of potatoes, and they have even taxed the oysters in the lower part of the State, in order to provide the funds which for years have helped to keep a check on the Mississippi and make possible the cultivation of that portion now devoted to agriculture. Having done their utmost, and the problem being preëminently a national one, it behooves the national government to take charge of the entire work. The cotton-grower of the South is not more interested, nor is this more vital to him than it is to the cotton manufacturer of New England. The farmer and the manufacturer of the West, the merchant and the business man generally, is as deeply interested in this question as are the people of Louisiana and Mississippi. It is a national, not a sectional issue."

THE PROSPEROUS SOUTH.

Millions of Money Coined This Year From Cotton.

[Special Cor. Manufacturers' Record.]

Dallas, Texas, February 12.

No one has named less than \$100,000,000 as the bonus, "pick-up" or "find," which the cotton producers of the South are enjoying this year. That is, it is universally conceded that at least this enormous amount of wealth—ready money, mind you, too—has been given to the South as a somewhat unexpected gratuity through the high level of prices which has been sustained for this year's cotton crop. In other words, the cotton growers of the South would have considered themselves repaid, and would have felt that they were prospering if the crop now largely marketed had brought them even \$200,000,000 less than it will have done by the end of this cotton year. And thus we have between \$5 and \$10 of spending money, as it were, for every living human creature in every cotton-growing State in the South. Further than this, the South has so enormously increased its grain and other farm crops that its cotton has become, to a large extent, a surplus money crop, so that to the bonus of much more than \$100,000,000 is to be added a half or two-thirds of the entire amount received for the cotton crop. So that it is well within the lines of conservatism to estimate that there has been put into the hands of the Southern planters and farmers this season between \$350,000,000 and \$500,000,000 of money, on top of what, if this had been withheld, would have been sufficient to give them a fair degree of prosperity.

It is too early to size-up all the benefits to this section which this vast influx of dollars will bring. A veritable river of money this is, flowing from its source to the sea of finance, and scattering untold and immeasurable blessings everywhere. It has been said that the South saved the country from a panic; and perhaps that is not putting it too strong. At any rate, the South is so financially solid that wars, panics and all the hosts of evil that spread their terrors otherwheres do not prevail against it. And everywhere one goes in the South the abounding prosperity is in evidence, with promises of greater benefits to come. Beginning with the farmers, mortgages and notes have been paid off in great

quantities, and improvements in ways of living have been introduced. New vehicles, implements, harness and teams, new furniture for the household and luxuries for the family have been bought, with resultant expansion of the Southern merchants' and manufacturers' trade. Country banks and city banks have enormously increased their deposits, and in turn have been enabled to provide the funds needed by merchants and manufacturers for the expansion of their business. Here in Dallas the deposits have increased 50 per cent. in a year—going from \$10,000,000 to \$15,000,000—and 40 banks in northern Texas showed in their last statements deposits aggregating \$35,000,000. This ratio holds good almost universally in the South, the Hibernia Bank & Trust Co. of New Orleans, as an example, having deposits to-day of between \$16,000,000 and \$17,000,000, which is all of 50 per cent. increase within the year.

With this general wealth and financial ease is coming the development of resources and enterprises through the investment of local capital, and with increased valuations and prompt payment of taxes, municipal improvements—more and better school-buildings, water works, sewers, paved streets and good roads—are being made all over the South. New store buildings, new bank buildings, new railroad stations, new residences (700 houses were built in Dallas last year, for instance)—are to be found all over the South, and the entire section is busy, bright and bountifully blessed.

Furthermore, from all that I can learn, I do not believe any mischance to the dealers in cotton futures is going to involve any great number of the Southern people. Wherever I have gone I have made inquiries along this line. Of course, one may hear of a number of cases where fairly snug fortunes—\$50,000 or such a matter—have been swallowed up by the slump of \$25 a bale which occurred in some of the months. But the speculative fever was by no means a universal infection, and even in spots where it raged with uncommon virulence, I am told that operators are still "ahead of the game." Down at Waco there was a man who sold his automobile for \$700 and played the cotton market furiously when the rise first began. He banked from the proceeds of his play, so I was informed, \$240,000. This has dwindled, but I am told he is still a good many thousand dollars ahead, and a bull pool of the same place, which was ahead some three-quarters of a million dollars, has lost back only about two-thirds of this amount. Some there are, at various places in the South—even school teachers, merchants and clerks—who have dabbled in the alluring pool, and quit, and are now wearing new clothes and luxuriating in various comforts which floated in to them on the tide of high-priced cotton; and others yet feel the pang that the wolf of want betrays when one's every dollar is gone.

But the way commission houses in the South have stood up through this furious storm, and the almost unbroken lack of surface indications of distress anywhere, lead to the conclusion that the victims of the cyclone are phenomenally rare, while I get assurances on every hand that the farmers, as a rule, and the busy, industrious people, as a whole, have paid no attention to the rise and fall of the bulls and bears.

Meanwhile, preparations are going ahead for a bumper crop for the coming year. I don't believe the hard-earned lesson of crop diversification will be ignored, for the value of the system has been too deeply impressed for that, as I

have every reason to believe. But down in the sugar-growing sections, where last year's unpropitious season cut off the profits much, I have heard of many cases where extensive cotton patches will take the place of cane. In the boll weevil parts of Texas, where ordinary yields of from half a bale of cotton to the acre were changed to but two or three bales to every 50 acres tilled, the farmers are eagerly turning to the suggestions of Government experts and are getting all the early seed they can from Indian Territory, Oklahoma and the Carolinas, and are proposing to adopt the methods of culture advised, by which it is hoped that a crop may be matured before the weevils begin their deadly work. The weevils probably got a million bales of cotton in this State. To those whose fields were stripped, as well as to the railroads which suffered from the loss of freight, the resultant losses in price brought no degree of help, and these interests are the most energetically at work just now on the problem of how to circumvent the Mexican pest. Complete success is by no one expected in this season or the next. With favorable weather there will doubtless be a larger crop of cotton raised the coming year than the last, but, nevertheless, a goodly number of Southern men are taking the chance that the world will next year need every pound of cotton the South can raise, and on this assumption are basing the belief that for some time to come cotton will be king, and will give to the South continued prosperity in a golden stream.

ALBERT PHENIS.

BIRMINGHAM IRON MARKET.

Some Shading of Prices Made on the Quiet.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., February 15.

The reports on the iron market for the past week are all of a declining tendency. The market was very quiet. This had its effect on values and led to shading of prices. At first this was done very quietly, but the secret could not be kept; and as it leaked out those interests which had endeavored to make values on a basis of \$10 for Number 2 Foundry were gradually compelled to meet the cuts made or retire from the market. The result is there is no uniformity of values and prices are very variable.

Taking Number 2 Foundry as the base grade, sales were made as late as Saturday on the basis of \$10 and off and on during the week that condition obtained.

But when markets were approached where competition was encountered values had to say. At first the paring was only light, but became deeper and deeper until the cut reached to 50 cents.

At that concession, even, the buyers were almost dormant. At this value, say \$9.50 for Number 2 Foundry, there was a disposition to call a halt and wait further developments before naming any lower price. The leading cause of the decline is the action of the Northern furnaces in naming prices in districts where both the Northern and Southern furnaces contend for business, that net them a loss and forced the same on any Southern interest securing the business.

During the past week the largest single order was for 2000 tons. The bulk of the business was for smaller orders, running from 100 to 500 tons and generally of a filling-in character. Those interests having a regular order trade were favored with some business. Some Number 1 Foundry and Number 1 Soft sold—100 tons of each—at \$10.50 for nearby shipment, and there was a sale of 1000

tons of Number 1 Soft at \$10.25, delivery extending over four months. Number 2 Foundry sold under varying circumstances from \$10 down to \$9.50. At the latter price there was a sale to an Eastern buyer of 300 tons, delivery 100 tons per month. At present values Number 3 Foundry would be \$9 to \$9.25, and Gray Forge would be \$8.50 to \$8.75. Basic iron is quotable at same price as Number 2 Foundry to 25 cents above it, but there is nothing doing in it.

The bulk of the business was spot and nearby delivery, but there was some of it done for delivery in the second quarter, and that, too, on the basis of current values. The disposition to meet buyers' views for this delivery is increasing. The price has declined from 50 cents to \$1 above current values to a parity with them, and there is no trouble to fill orders on this basis.

The furnace interests most prominent in the talked-about merger have consumed the entire week in getting a start at the business. Experts to inspect the respective ore and coal properties and to value them have been chosen. The Sloss-Sheffield Co. selected J. W. Worthington as their ore expert and Walter Moore as their coal expert. The Republic Iron and Steel Co. selected W. M. Given as their ore expert and C. P. Perini as their coal expert. The Tennessee Coal and Iron Co. selected T. H. Aldrich to represent them in both iron and coal. All of them are well known here and familiar with the mineral and coal properties of the district and their value. They will act jointly in the prosecution of their duties and it is supposed that their labors will consume at least 60 days.

The annual report of the chief coal mine inspector of the State shows that the output for 1903 was 11,700,703 tons, as against 10,329,479 in 1902. Of this amount this country produced 6,261,048 tons, or approximately 60 per cent.

In Walker county the increase in production was the greatest, as development has been greater there than elsewhere. It may seem wild to say it, but the indications point to a material increase this year over that of 1903.

All over the district development of coal properties is going on constantly and the amount that will be produced this year is a question of labor.

The coke output for 1903 was 2,658,185 tons, against 2,210,735 tons, an increase of 447,450 tons.

The number of coke ovens in operation in 1903 was 8,638, as against 7,168 ovens in 1902.

J. M. K.

AMONG SOUTHERN FURNACES.

Changes and Improvements in the Pig Iron Industry of the South.

In gathering its semi-annual statistics of pig iron production, the American Iron and Steel Association has accumulated much interesting information about the blast furnaces of the country, showing changes, new construction and improvements. From a large number of paragraphs published recently in the Bulletin of the Association, the following notes about Southern plants are taken:

Deborah Furnace, at Catoctin Furnace P. O., Md., which was idle on December 31, ran for three weeks only in 1903. The furnace is not likely to resume work in the near future.

The Alleghany Ore and Iron Co., of Clifton Forge, Va., had two of its four furnaces in blast on December 31. All of its furnaces were active last year.

The Virginia Iron, Coal and Coke Co.,

of Bristol, Tenn., was operating six of its ten furnaces at the close of 1903. One furnace will probably resume work in March.

Princess Furnace, at Glen Wilton, Va., was banked on December 31, but resumed blast on January 18. It ran for 39 weeks in 1903.

The Monarch Blast Furnace Co. has remodeled Liberty Furnace, at Liberty, Va., and expects soon to have it in blast. The capacity is to be increased to 100 tons per day. Charcoal will be used. The furnace has been idle since 1893. John Gaffney is president, James Gaffney is vice-president, James B. Brown is secretary, John Gaffney, Jr., is general manager, and John P. Marshall is superintendent.

The Lobdell Car Wheel Co. operated its charcoal furnace near Rural Retreat Station, in Wythe county, Va., for about 19 weeks in 1903. The furnace was idle on December 31. It may resume in April or May.

The Union Iron and Steel Co. expects to have its new furnace at Big Stone Gap, Va., ready for blast late in 1904.

The Wheeling Steel and Iron Co. was not operating any of its furnaces at the close of 1903. Its Top Mill Furnace, at Wheeling, was being relined and will probably be ready for blast in March. Its Martins Ferry Furnace was torn down in 1903, and is now being rebuilt. It will not be completed until late in 1904.

The Ashland Iron and Mining Co., Incorporated, had two of its three furnaces at Ashland, Ky., in blast on December 31. One furnace will be rebuilt in 1904 and its size increased to 75x17 feet.

Chattanooga Furnace, at Chattanooga, Tenn., is now operated by the New Chattanooga furnace Co. It ran for 44 weeks last year, and was blowing on December 31.

The Embree Iron Co. is now the owner of Embreville Furnace, at Embreville, Tenn. The furnace was relined last year. It was idle during the whole of 1903.

The furnace of the Red River Furnace Co., at Clarksville, Tenn., was idle on December 31. It is ready for blast.

The Tennessee Coal, Iron and Railroad Co. has practically dismantled its No. 1 Furnace at South Pittsburg, Tenn. Only one of its two remaining furnaces at South Pittsburg was in blast on December 31.

Actna Furnace, at Actna, Tenn., is now owned by the First National Bank of Nashville, Tenn. It has been idle for over 10 years, and is for sale. The furnace was formerly owned by the Bon Air Coal and Iron Co.

The Dover Iron Co. is rebuilding its Dover Furnace, at Carlisle, Tenn., and expects to blow it in in March or April. It was partly destroyed by fire in August, 1903. The Bear Spring Furnace of the company ran for 40 weeks in 1903, and was in operation on December 31.

Of its 14 furnaces in Alabama, the Tennessee Coal, Iron and Railroad Co. had 10 in blast on December 31. It expects to blow in one idle furnace in February. Its building, Ensley Furnace, may be ready for blast in May.

The Sloss-Sheffield Steel and Iron Co., of Birmingham, Ala., had six of its seven furnaces in blast at the close of 1903. Its four Sloss Furnaces, at Birmingham, ran for 52 weeks last year.

Jenifer Furnace, at Jenifer, Ala., ran for about 11 months last year, but was idle on December 31. The company is in the hands of a receiver.

The furnace of the Northern Alabama Coal, Iron and Railway Co., at Talla-

dega, was idle on December 31. It ran for 32 weeks in 1903.

All three furnaces of the Sheffield Coal and Iron Co., of Sheffield, Ala., were in blast during 1903, but one stack only was running on December 31. The officers of the company are: William Edenborn, president and treasurer; W. R. Walker, vice-president; Otto Mann, assistant treasurer, and J. E. Cole, secretary. The New York offices have been removed from the Empire Building to the Maritime Building.

The Williamson Iron Co., of Birmingham, Ala., will probably blow in its furnace in March or April. It ran for 40 weeks last year, but was idle on December 31.

The two furnaces of the Woodstock Iron Works, at Anniston, were idle on December 31.

The Woodward Iron Co. was operating both of its furnaces at Woodward, Ala., at the close of 1903. It is building another furnace.

The Lookout Mountain Iron Co. expects to have its new furnace at Battle, Ala., ready for blast in April.

The Eagle Iron Co. will not blow in its furnace at Attalla, Ala., until there is an improvement in the demand for charcoal pig iron. It was idle on December 31.

The name of the "Old Alcalde" Furnace, at Rusk, Texas, has been changed to "Sam Lanham." It is being rebuilt, and will be ready for blast in the spring. Charcoal will be used.

The St. Louis Blast Furnace Co., of St. Louis, Mo., blew out its furnace on October 8.

The Ozark Blast Furnace Co., which expects to commence work very shortly on a new coke furnace, recently elected the following officers: A. J. Eisenmayer, president, Springfield, Mo.; M. T. Russell, vice-president, Phoenix, Ariz.; Frank Brasier, secretary, and F. E. Wear, treasurer, both of Kansas City, Mo., and George Cowie, superintendent. The furnace will make a specialty of car-wheel pig iron, and will have an annual capacity of about 70,000 gross tons. Local brown hematite ore will be used. The furnace will probably be built in the neighborhood of Springfield, Mo., or at Cape Girardeau.

ANOTHER WELL IN.

Developments During the Week in the Texas-Louisiana Oil Fields.

[Special Cor. Manufacturers' Record.]

Beaumont, Texas, February 14.

The Higgins Oil & Fuel Co. brought in its No. 1 well at Batson yesterday on nine acres of land owned in fee by the company. Estimated capacity from 10,000 to 15,000 barrels daily. This will extend the fields slightly.

Shipments of oil from Port Arthur for the period from January 27th to February 11th, inclusive, amounted to 253,846 barrels, all of which was crude, excepting 16,338 barrels of lubricating oil and 4000 barrels of asphaltum shipped by the Gulf Refining Co. to the Guffey Co. at Philadelphia, and 11,081 barrels of solar oil shipped by the Gulf Refining Co. to the Standard at Constable Hook.

The Standard received 131,351 barrels of the total of 253,846, or more than half of the entire amount shipped by water in the sixteen days. The Guffey Co. took the bulk of the remainder.

Shipments by rail from the various fields since the first of the year have been as follows:

Southern Pacific Co.—From Sour Lake, 2136 cars; from Gladys (Spindletop), 252 cars; from Beaumont, 106 cars; from

Jennings, 306 cars. All shipments inclusive of February 8th.

Kansas City Southern.—From Beaumont, 276 cars; from Spindletop, 25 cars. All shipments inclusive of February 13th.

Santa Fe.—From Beaumont, 87 cars. Inclusive of February 12th.

A large proportion of the oil shipped by rail goes to the railroads for fuel use. February shipments show a falling off in the movement of oil, excepting in the case of Jennings. Up to the 11th inst. there had been no shipments during the present month from Sabine Pass. No significance can be attached to the decrease in general shipments. There are occasional lulls in the business, due frequently to the fact that the tank steamers which convey the oil to the Northern ports are bunched. The latter part of February, in all probability, will make up for the earlier shortage.

Crude prices at Beaumont range from 34 to 37 cents for oil in tanks, and at Sour Lake from 30 to 32 cents, with very little demand at either place.

Five new wells are in at Batson. The new pipe lines are not completed, and the oil is being flowed into earthen tanks. The Heywood Oil Co.'s well at Batson, and the Higgins Oil and Fuel Co.'s No. 1 are both at the interesting stage.

As a result of the coming in of the Chicago Jennings gusher at Jennings, contracts have been made for the drilling of seven wells in the Louisiana field. The Chicago Jennings No. 2 came in on January 11th, and is still flowing, maintaining a production of from 1500 to 2000 barrels a day.

HOLLAND S. REAVIS.

Implements for Mexico.

Mr. A. J. Lespinasse, United States Consul at Tuxpan, Mexico, reports that manufacturers and dealers in agricultural machinery and implements would serve their own interests best if they would conform to the requirements of farmers in Mexico. He says:

"Mexicans are, as a rule, extremely sensitive, and, while usually desirous of adopting modern ideas and implements, they are, like all the rest of mankind, loath to admit their ignorance, although glad to learn if a little patience and regard for their feelings are displayed by those who desire to do business with them. There is an immense field for all modern agricultural appliances in Mexico, if properly introduced by competent and painstaking persons who speak the language, and who are willing to patiently and persistently try to overcome prejudices which have existed for centuries. Such persons will in time be more than amply repaid for their trouble by securing an immense demand for their products."

Wants Bag Machinery.

Pedro Miranda, No. 2 San Lorenzo, City of Mexico, a manufacturer of palm-leaf hats, writes to the Manufacturers' Record that he needs machinery for making bags and bagging from lechuguilla, a rank marsh grass with fiber similar to hemp, as strong as those which are made in the north of Mexico by hand, and which in consequence of their texture are extremely durable and are used in carrying metals and coal.

Mining in Mexico.

H. V. Wallace, a mining engineer now interested in several mining properties in Sonora, Mexico, says that they are paying satisfactorily and promise to develop into some of the best producers in Mexico. His most lucrative mine is equipped

with a cyanide and free-milling process operated with steam power, and the mine is illuminated electrically. His mines are in a field which has paid an annual tax of \$1,250,000 to the Mexican Government.

STOOD THE TEST OF FIRE.

Continental Trust Building Found Sound in all Essential Parts.

One of the most impressive facts about the great fire in Baltimore is that the immense steel-frame buildings and several smaller ones of similar construction are the only edifices which to any degree withstood the flames. All the skyscrapers are standing, the most striking of them being the Continental Trust Building, on the southeast corner of Baltimore and Calvert streets. The strength of this immense structure is shown by the fact that a large safe, which had rested on wooden blocks in an office on one of the upper floors, fell with a crash upon the floor without any injury to the steel and tile arches, though they were then subjected to all of the awful heat, which has been estimated as high as 2500 degrees.

A thorough examination of the Continental Building was made by Mr. D. H. Burnham, of Chicago, its architect, and he reports that, with slight exceptions, all of the steel floor arches and main partitions are intact. Engineers also took levels throughout the building, and report that it is everywhere plumb, the only distortion being to cast iron mullions along the courts and front, but the essential parts of the structure are wholly safe and uninjured.

Mr. Thomas Hulings, vice-president of the Continental Trust Co., directed the attention of the engineers and other experts to the fact that the main vault on the banking floor of the trust company was quite uninjured, and the door opened promptly. In the office of the United Railways Co. on the 10th floor, 2000 pounds of silver money which had been stored there were found safe.

Alabama's Iron Statue.

The center of the Alabama exhibit of iron and steel products at the St. Louis Exposition will be a colossal iron statue of Vulcan, the second largest statue in the world, the first being the Statue of Liberty in New York harbor. The statue was modeled by Giuseppe Moretti, of New York, who was obliged to use an uncompleted church building in Passaic, N. J., to get space high enough to contain it. It will be shipped in sections to Birmingham to be cast in iron. The fund for the statue was raised by the citizens of Birmingham, and at the close of the exposition the figure will be returned to that city and set up in a park.

Virginia Coal for Japan.

It is announced at Detroit that the Japanese government gave, three weeks ago, a rush order for 40,000 tons of Pocahontas smokeless coal to Jewett, Bigelow & Brooks, of Detroit. The firm's mines, covering 6000 acres, are near Welch, W. Va., and the output is about 2800 tons a day. The Japanese order specifies that the product is to be delivered at the mines, in lots of 10,000 tons each, within the next 30 days.

Anthracite in Alabama.

It is reported at Birmingham that the Pennsylvania Coal Co. has discovered, at a depth of 600 feet, near Cordova, a 20-foot vein of anthracite. Further examination is expected to reveal the presence of an extensive bed of the coal at an average depth of 400 feet.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

ROCK ISLAND'S PLANS.

President Loree Says It Will Go to New Orleans and Galveston.

President L. F. Loree, of the Rock Island system, who has been making a tour of its lines in the South and Southwest, is quoted as saying that it is the object of the company to establish important terminals at both New Orleans and Galveston. The Houston Post reports Mr. Loree as follows: "There are only a limited number of good ports on the east coast of the United States, and only two of them are located on the Gulf coast. These two are at New Orleans and Galveston. Every line of importance operating in the middle West must seek admission sooner or later to both of these ports. The great grain products of the Western States must find an outlet through these two ports, and the railroads that attain these outlets are the ones with the greatest futures before them."

Mr. Loree then went on to confirm the report that the Rock Island-Frisco lines had already obtained an outlet at New Orleans through a trackage arrangement with the Mobile & Ohio Railroad, connection being made at Tupelo, Miss. The Frisco has its own terminals at New Orleans, which Mr. Loree is quoted as saying are the finest of any line there, having a total of 15,000 feet, or 7280 acres, on the river front. The company's engineer and President Loree are working on plans for this improvement.

Concerning plans for reaching Galveston, Mr. Loree declined to talk. Some time ago the Rock Island proposed to reach Galveston over the Houston & Texas Central, in which, it was announced, the system had obtained a half interest; but the attitude of the railroad commission of Texas has thus far prevented the consummation of that plan.

Dublin & Southwestern.

The Dublin & Southwestern Railroad Co., organized at Dublin, Ga., has applied for a charter. It has been formed by large lumber interests, and proposes to build a line from Dublin via Eastman to Abbeville, Ga., 45 miles. It will pass the mill of the Rentz Lumber Co., near Reedy Springs, about 10 miles from Dublin, and will follow a survey made several years ago by the Georgia Shingle Co. J. P. Pughley is the engineer who is locating the route, and 400 tons of steel rails are reported shipped by the Carnegie Steel Works for building the road, which will connect with the Macon, Dublin & Savannah at the Dublin Cotton Mills, and will use its tracks to enter Dublin.

The incorporators are: E. P. Rentz, William Pritchett, J. M. Stubbs, D. S. Blackshear and F. S. Battle, of Dublin; W. D. Harper and John J. Simpson, of Atlanta, and J. P. Pughley, Homer D. Strickland and George Renfz, of Emanuel county.

New Road for Kentucky.

Mr. E. J. Hunter writes from Lexington, Ky., to the Manufacturers' Record concerning a plan which he is pushing to build a railroad from Brooksville, in Bracken county, through the southwest corner of Mason county to Johnson, in Fleming county, connecting with the Covington, Flemingsburg & Ashland road to Hillsboro, in the same county, where the new line is to begin again and run to Salt Lick, in Bath county, con-

nected with the Chesapeake & Ohio Railway and the Kentucky Midland from Paris. At the other end of the line there is connection by the Brooksville Railroad with the Chesapeake & Ohio at Wellsburg. The new line will demand the building of two pieces of new track, one 30 miles and the other 16 miles long, which, with the roads whose tracks will be utilized to make this through connection, will form 75 miles of continuous track.

"This road," says Mr. Hunter, "if built, will also connect at Salt Lick with the Licking Valley road, which runs for 30 miles up the Licking river into Morgan county, and, with a further extension of about 15 miles to West Liberty, will make a continuous line of 120 miles and give Cincinnati a direct line through several of the richest farming counties of the State into the heart of the great coal and timber country of Southeastern Kentucky, and the promoters hope to complete their line this season. The enterprise has lain dormant during the past two years, but the indications are now more favorable and point to ultimate success."

Colorado, Oklahoma & Southeastern.

Mr. P. A. McCarthy, civil engineer, Lufkin, Texas, writes the Manufacturers' Record that he has made a reconnaissance of the proposed route of the Colorado, Oklahoma & Southeastern Railway, and says:

"This road is proposed to be built from a point on the Santa Fe—either Woodward or Gage, in Woodward county, Okla.—thence in a southeasterly direction through the counties of Woodward, Dewey and Custer, to a point on the Choctaw, Oklahoma & Gulf—at or near Weatherford or Hydro—a distance of 100 miles. The road will traverse rich, fertile and well-settled farming territory, now almost wholly without railway facilities. The cost of construction will be nominal. The company is offered valuable concessions in the way of right of way, bonuses and town site privileges.

"The officers are all representative Oklahoma business men, and as follows: President, C. M. Cade, Shawnee; vice-president, J. H. Dillon, Geary; secretary, H. E. Bonebrake; treasurer, C. E. Davis; general attorney, W. D. Cardwell, all of Weatherford. Directors, the gentlemen above named and C. H. DeWade, of Oklahoma City; J. W. Morrison, of Independence; J. N. Cook, of Elk City, and A. T. Kruse, of Geary, Okla.

"The company is making all necessary preparations to commence active construction within the next 60 days, and rush the work to completion so as to move this year's crops."

New Line in Louisiana.

Mr. S. E. Schmink, secretary-manager of the Bunkie Progressive Union, Bunkie, La., writes the Manufacturers' Record that the railroad which it is proposed to construct will be 35 or 40 miles long, from a point on the Red River Valley Railway north of Bunkie, and will run thence through Bunkie, touching at Eola and extending into the northern end of St. Landry parish. Besides connecting with the Red River Valley Road (Louisiana Railway and Navigation Co.), the proposed line will cross the Texas & Pacific Railway at Bunkie and the Southern Pacific Line at Eola.

The section to be traversed, Mr. Schmink says, is the richest of Central Louisiana, the soil being alluvial and producing the best of cotton, sugar cane, corn and diversified crops. The north-

ern end of St. Landry parish has no railroad, and the proposed line will open up considerable new territory.

All communications relating to supplies, time for opening bids, etc., should be addressed to W. D. Haas, who is promoting the road.

Vera Cruz & Pacific.

President R. B. Pegram, of the Vera Cruz & Pacific Railroad, is reported as saying that the company is pushing construction on its extension as much as possible before the rainy season begins. There are about 1200 men employed on roadbed work and nearly 200 on bridge construction. There will be 75 bridges of small dimensions, and they are to be completed by May 1st. A concession was lately granted to build four kilometers of road (about 2½ miles), from Los Cocos, the terminus in the city of Vera Cruz, to the wharf. This will enable the cars to be loaded directly from steamers. Materials have been ordered for building this extension, and its construction will be pushed. In about a month the entire line is expected to be in operation.

Stilwell Pushing the "Orient."

A report from Texas says that the Kansas City, Mexico & Orient Railway, which is incorporated in that State under the name of the Panhandle & Gulf, has received, at Sweetwater, Texas, sufficient ties and rails to lay 200 miles of track, and that it is proposed to have about 500 miles of line in Texas in operation by the end of 1904. Already over 300 miles of grade are finished.

From Mexico it is reported that the Chihuahua & Pacific Railroad, whose line will form part of the Orient's route through that country, has recently contracted for 300,000 pine ties for an extension 140 miles long to be built through the Guerrero Valley, in the State of Durango, to timber land in the foothills of the Sierra Madre Mountains.

Beaumont, Sour Lake & Port Arthur.

An official statement of the Beaumont, Sour Lake & Port Arthur Traction Co. says it has completed 10½ miles of track, from Beaumont, Texas, to Pine Island Bayou, across which a bridge will be constructed. Also, that work will begin this month to build the line to Port Arthur, and then the road to Sour Lake, a total of 40 miles. Lines will also be built to Saratoga and Batson Prairie, 24 miles additional. The plan of the company is to reach the different oil fields and to transport their products to tidewater at Port Arthur. It will also be in a position to carry considerable lumber.

A Southern Pacific Extension.

It is reported from Houston, Texas, that the New York, Texas & Mexican Railway (Southern Pacific system) proposes to extend the Tres Palacios Branch from the present terminus via Port Lavaca to Refugio, about 110 miles. This, it is said, is a result of the announcement made by the St. Louis, Brownsville & Mexico Railway (Colonel Uriah Lott's new road) to build to Galveston. The necessary survey, according to rumor, is in progress, and the branch will, it is further stated, connect with the Galveston, Harrisburg & San Antonio Railroad (also a Southern Pacific line) at Columbus, Texas.

Norfolk & Southern Buys a Line.

Mr. M. K. King, general manager of the Norfolk & Southern Railroad, writes from Norfolk, Va., to the Manufacturers' Record as follows:

"The company has bought the Wash-

ington & Plymouth Railroad, extending from Washington to Plymouth, N. C., and intends building from its present road at Mackey's Ferry to Plymouth, a distance of about 10 miles. The road is being built of standard gauge, and the road from Plymouth to Washington will be made uniform in gauge during the year.

"The acquisition of the Washington & Plymouth Road, and the building of eight miles, will secure to the company a large increase in its forest product traffic."

Railway and Light Deal.

Advices from Knoxville report that the Knoxville Traction Co. and the Knoxville Electric Light Co. have been transferred to their new owners, Messrs. Ford, Bacon & Davis, of New York, and associates. C. H. Harvey is president of both companies, and the directors of the traction company are W. S. Shields, E. E. McMillan, C. H. Harvey, J. K. Newman, A. H. Ford, C. F. Uebelacker and George H. Davis. The directors of the electric light company are C. H. Harvey, F. L. Fisher, W. B. Brockway, J. K. Newman and George H. Davis. It is said that both properties will be considerably improved, the railway building several extensions.

Railroad Notes.

The Chicago, Rock Island & Texas Railway (Rock Island system) is rebalancing its line between Fort Worth and Dallas, Texas.

A rumor from Savannah, Ga., says that a deal has been closed by the Seaboard Air Line for control of the Macon, Dublin & Savannah Railroad.

The Seaboard Air Line is reported to have closed a deal with the Louisville & Nashville Railroad for the use of the Union Depot at Birmingham, Ala.

It is reported from Richmond, Va., that railroad men deny that the Chesapeake & Ohio Railway contemplates buying the Farmville & Powhatan Railroad.

The \$5,000,000 loan negotiated by the Seaboard Air Line with Thos. F. Ryan and Blair & Co., of New York, and T. Jefferson Coolidge, Jr., of Boston, has been approved by the stockholders.

J. William Marshall, of London, said to represent English syndicates, is reported to have visited Louisville, Ky., to investigate various interurban electric railway propositions which are seeking capital.

A dispatch from Bristol, Va., says that prominent citizens of Russell county, in that State, are agitating plans to build an electric railway from Cleveland, on the Clinch Valley Division of the Norfolk & Western Railway, via Abingdon, Va., to Bristol, about 50 miles.

A dispatch from Raleigh, N. C., says that Captain V. E. McBee has proposed to lease the Atlantic & North Carolina Railroad from the State, and that Governor Aycock is considering the offer, which projects an extension of the line from Newbern via Edenton to Norfolk.

South Carolina Kaolin.

A dispatch from Graniteville, S. C., states that the United States Steel Corporation has purchased from Dr. J. J. McMillan, for \$25,000, deposits of kaolin on the old Riley McCarty place, about two and a half miles from Aiken, S. C. The deposits were slightly worked ten years ago, and what clay was shipped brought a fine price in Northern markets. The whole of a 20-acre tract of land is underlaid with a stratum of about 27 feet in thickness, of the purest kaolin clay.

LUMBER.

PINE OIL INDUSTRY.

The By-Products of the Destructive Distillation Process.

Editor Manufacturers' Record.

In accordance with your request I will endeavor to give you a few points of information in reference to the pine oil industry. I have been connected directly and indirectly with the business since 1882 and have kept very closely in touch with its development.

The raw material dealt with is what is known as "lightwood" or "fat" pine, and is to be found over the entire yellow pine area of the south, but is only found in abundance on lands that have been denuded of the timber by saw mill operations. It is nearly always formed in the heart-wood of the tree and for the purpose herein named, it is found in the limbs left lying on the ground, and in the stumps. After the tree is felled the sap usually rots off in a short time, leaving the resinous portion exposed; considerable of this is destroyed by forest fires, but the greater part of it chars over, leaving very little but rounded billets, which do not ignite from grass fires. Owing to the large amount of creosote and anti-septic oils present, the material is not affected by decay and lasts indefinitely. In the aggregate it exists in enormous quantities, there being hardly any yellow pine section which could not supply enough of it to run several large plants many years to come. A little reflection and calculation will be sufficient to show that more turpentine and allied products exist in the present supply of this raw material, than has been obtained in the past by ordinary turpentining operations over the whole period. This statement can be better appreciated when it is said that it is a very poor acreage which will not produce as much as three cords of this material. When the wood is treated in steel retorts it can be made to produce an average yield of 126 gallons per cord, which in excess of quantity and money value shows much larger returns than the yield of turpentine per acre produced by the hasty and ruinous method of boxing the original trees can show.

Lately there have been several new processes introduced for extracting wood spirits, but the most generally successful is known as the "destructive distillation" process, and consists of packing the wood, without any preliminary treatment but just as it comes from the woods, into hermetically sealed retorts, to which are attached suitable condensers. The average yield by this method, according to the experience of the writer, can safely be estimated at 126 gallons per cord, and from 125 to 200 gallons of pyroligneous acid. From each cord of wood about 15,000 cubic feet of a good burning gas is also eliminated, this latter product being conducted to the furnaces of the retorts and there burned as fuel. The pyroligneous acid is used for making wood alcohol, acetate of lime, acetone, etc. The first part of the process is carried out under low temperature conditions and the heat gradually raised until charcoal is the only residue left. Three fractions of oils are obtained at the retort as follows: 1st fraction, 26 gallons; 2d fraction, 12 gallons; 3d fraction, 88 gallons, making a total of 126 gallons. These oils are to be considered as crude and not available for market until they are put through a refining process, which is simple in operation and economical in cost; it consists in distilling the frac-

tions with suitable reagents by processes usually well guarded. From the above amount of crude oil we can, after refining, divide the final result into 26 gallons of wood spirits and a much larger amount into the so-called by-products. At the present time the demand for the by-products has kept pace with the supply, and as a matter of fact the money value of these products considerably exceeds that of the wood spirits. These by-products consist of tar, oil of tar, a substitute for turpentine, two high-grade varnish oils, an oil for the treatment and preservation of leather, a successful substitute for linseed oil, a black paint for iron work, and several high-grade surgical and other antiseptics. Most of the above products are derived from the fraction of oil obtained at the retorts under high temperature conditions and during the decomposition of the wood into charcoal.

It is very evident that the natural supply of spirits of turpentine cannot be depended upon for very many years to come, owing to the exhaustion of the timber supply. As turpentine is a very necessary article of commerce, it is becoming more and more important to find a suitable substitute. There are a number of these substitutes on the market, most of them being manufactured from rosin and petroleum products. They are of exceedingly doubtful value, to say the least. In wood spirits we have a substitute for the commercial article which differs from the latter only in the matter of odor, and this view is borne out by the remarks of Mr. Bent, chairman of the National Paint and Varnish Association, whom I quote as follows:—

"I spent two or three days with Prof. Metz, of the Tulane University, New Orleans, on this subject, and he reported that this wood turpentine was pure turpentine in all respects chemically. If this be true, no objection can be offered

to the sale of this article under the brand of spirits of turpentine or American turpentine. The process by which it is made does not enter into the question, nor does the odor. The peculiar odor of turpentine is due to aldehyde-like products caused by the action of light and air. The presence of creosote would of course be an impurity, but this should be eliminated by thorough washing with caustic soda before the final distillation to dissolve the phenols and cresols present. As is known, the odor of ordinary turpentine varies with age and action of sunlight, and a difference of odor between turpentine prepared by two different methods can no more be urged as showing the impurity of one than can the difference of odor between acid-bleached and fire-bleached linseed oil be propounded as showing one of these products to be impure. Any difference in odor, however, is certain to affect the value of this new product because of the prejudice of consumers."

Prof. Metz speaks of the prejudice of consumers due to the difference of odor. This prejudice is natural and is to be expected when any conservative manufacturing element is asked to consider the adoption of a new product. The writer believes, however, that the trade is beginning to realize that it takes more than a slight difference of odor to condemn a product, otherwise identical with ordinary spirits. It would perhaps surprise a good many to know that a number of the largest paint manufacturing concerns are daily using wood spirits, without any dissatisfaction as far as the writer knows to their customers.

One of the most valuable products de-

rived from the destructive distillation of wood and which deserves special mention is the wood creosote, or wood preservative as it is more usually called. Owing to the rapid destruction of our forests, the question of prolonging the life of railroad cross ties, bridge timbers and wooden construction work generally is attracting more and more attention every year. It is a well-known fact that "fat" pine or "lightwood" never decays, when this material becomes charred over by former fires, and the writer is convinced that it will lie on the ground for generations without change. Its preservation is due to the creosote and other antiseptic oils contained in it.

Accepting the foregoing as facts, it is logical to believe that this preservative material after extraction can be transferred to timber lacking in it, communicating to the latter some of the decay resisting qualities of the "lightwood." There has been very little effort made to push this product into prominence, although one of the largest railroads of this country have adopted it as their standard of wood preservation. At the present time there are a few creosoting plants in existence in the south, importing "dead oil" of coal tar from England and Germany, at considerable expense. We have right here at home an infinitely more valuable product, which can be made for a few cents per gallon. The building of the Panama Canal will necessitate the use of enormous quantities of creosoted lumber, as it will be necessary in that climate to treat all timber, even that intended only for temporary use. Already the possibilities of wood creosote are being talked of in this connection, and the writer is of the opinion that it will not be long before one or more large creosoting plants are in operation, using this preservative in large amounts.

The business of wood distillation is now being carried on at a number of points in the South. The plants are usually small and there is no uniformity in the quality of the products turned out. This is due in part to the fact that during the past year or two, there has been a great exploitation of certain so-called new processes, skillfully advertised, with the result that a number of small companies have been organized on the strength of large promises of financial returns, which have not materialized. The owners of these plants usually have a sketchy idea of the needs of the business, and very little appreciation of the technical nature of the process. This condition of affairs has resulted in putting on the market a heterogeneous collection of products, difficult to classify and more difficult to find a market for. It is probable, however, that the business will be ultimately controlled by stronger influences who will be in a position to bring order out of chaos.

J. J. MALLONEE.

Mobile, Ala.

Southern Timber Advantages.

Mr. John W. Prentiss, a large timber owner of Calcasieu Parish, La., points out as special advantages of the timber lands of the South the location in it of the largest consecutive bodies of longleaf pine in the country, the comparative fireproof character of the timber lands, there being little undergrowth, and even where fires occur the trees being merely blackened, the inexpensiveness of lumbering operations because of the flatness of the lands and their nearness to tide-water. He says that twelve concerns practically control about 3000 acres of

virgin pine lands in Southwestern Louisiana and Southeastern Texas, while about 90 per cent. of the timber land in Mississippi is in the hands of eleven concerns. The rapid consumption of timber in the North, increasing prices there, is making a demand for Southern timber, and increasing the price for it. Mr. Prentiss said that at the present rate of cutting there will be no timber about New Orleans in twenty-five years, as mills are cutting faster all the time, and Northerners are moving their mills into that territory.

Madagascar Hardwood.

United States Consul William H. Hunt, of Tamatave, Madagascar, makes the following report about the opportunities for hardwood dealers there: "After a very careful examination of the various timbers peculiar to Madagascar, particularly ebony, palisander, rose, and many other woods which with the development of this colony will prove of high value, I am able to state that there is an opening here for Americans to organize a direct trade with this island for regular cargoes of some of the very choicest woods sought after by both shipbuilders and cabinetmakers. The ebony of Madagascar is already very much in vogue on the Hamburg market. There is also an ample supply of a very heavy wood called 'lalona,' which is imputrescible, even after thirty years' immersion in salt water. I might mention also the 'vintanana,' a light wood for marine construction, called in the French market 'acajou a gros grain' (coarse-grained mahogany), very pliant and without knots, its specific gravity being lighter than water. I could mention many other woods, the technical description of which would only be understood by specialists, so would refer all merchants interested in the outlook to apply in the first place to Mr. Louis Marquet, Sainte Marie, Madagascar (letters preferably to be written in French), when all particulars will be furnished. The timber export trade from Madagascar is one that is arousing some interest just now, in view of the results of the scientific explorations of the forests so admirably conducted by the French. South African dealers have their eyes on the timber resources here, and an American firm has recently sent out from there an expert representative."

Honduras Pine Lands.

United States Consul William E. Alter, of Puerto Cortes, Honduras, writes, calling the attention of Americans looking for opportunities for investment to the large tracts of pine lands in Honduras, which in the near future should be of great value, if for no other reason than on account of the turpentine which they could be made to yield. There are tracts of pine lands on navigable rivers leading to the sea and within 30 miles of the railroad, containing thousands of acres, which at present can be purchased at very low prices.

Baltimore Fire and Pine.

Many of the lumber manufacturers and dealers in Savannah believe that the great Baltimore fire will increase enormously the demand for yellow pine, and that consequently the mills everywhere will be kept busy from six months to a year. Others, however, think that very little yellow pine will be used in reconstructing the city. But it is pointed out that during the work of construction a large amount of lumber will be needed for erecting temporary structures and for

scaffolds, but the material commonly used for this work is not the standard yellow pine, but a cheaper grade of pine that is cut chiefly in the Carolinas and Virginia. The demand for this will be strong, and consequently the prices may be increased for a time, it is thought, but will hardly keep up, as there is always a liberal supply on the market.

Lumber Notes.

The Wildell Lumber Co. is making plans to develop a 12,000 acre tract of spruce, hemlock and cherry timber on the Coal and Iron Railway, about 32 miles from Elkins, W. Va.

The Atlantic Coast Lumber Co. has purchased a boat, which will be run on the Peepee river, in South Carolina, to carry general cargoes on the up trip and cross ties and lumber on the down trip.

The George H. Friend Paper and Tabloid Co., of West Charlotte, Ohio, has established a timber camp about 18 miles above Memphis, where 100 men will work getting out timber for the paper mills.

About 150 members of the Indiana Lumbermen's Association have been making a tour of the South during the past week on pleasure bent, and incidentally on inspection of Southern timber resources.

The Atlantic Coast Line is having at present a heavy traffic in lumber bound for the North, where there is a great demand for pine. Mills in the section around Florence, S. C., where there was a little sag in operations a few months ago, are cutting their full capacity, and many of the larger sawmill concerns have orders ahead for a year and more.

The Pine Belt Construction Co., of Raleigh, N. C., has been incorporated with a capitalization of \$100,000, for the purpose of installing a plant for the distillation of spirit of turpentine from pine wood by the steam pressure process. The company has been experimenting with a plant in Mississippi for six or seven months, and will install a plant by March 1 at Chalybeate, N. C., on the Raleigh & Cape Fear Railroad.

A novel use for pine wood is suggested by experiments which are being made in Bavaria in the manufacture from it of a substitute for cotton. The method as described is to reduce the wood to the finest layers possible, and to subject it to a vapor process for 10 hours. The pulp thus obtained is given a soda bath for 36 hours, by which it is transformed into a kind of cellulose, made resistant by the addition of oil and gelatine. It is then drawn out untangled and prepared for spinning by machinery.

Greatness of Texas.

Mr. F. W. Mott, of St. Louis, says that the real estate agents of that city have many inquiries about Texas lands, and he heartily approves the policy of the railroads in bringing real estate men from outside to view the land. He is amazed at the progress made in Northern Texas, which he recently visited, and expressed the belief that there is no better field in the United States for manufacturing enterprises than that offered by Texas. He advocates strongly a proper representation of the State at the St. Louis World's Fair, and says that, as the possibilities are so great and the resources so varied and extensive, it is impossible for Texas to talk too much about itself.

During the past year the assessed value of realty in Columbus, Ga., increased \$400,000.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

American Cotton Manufacturers.

A representative delegation of the American Cotton Manufacturers' Association, which will hold its next annual convention at Washington, D. C., on May 11th and 12th, was received by President Roosevelt last Monday evening.

The delegation extended to him an invitation to address the convention, and it is expected that Secretary Hay, of the Department of State, and Secretary Cortelyou, of the Department of Commerce and Labor, will also address it. The board of governors of the association are convinced that this convention will be largely attended by cotton manufacturers in every line, as present conditions have made cotton of even greater importance to the country than ever before.

The Cotton Movement.

In his report for February 12th, Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 165 days of the present season was 8,348,022 bales, a decrease under the same period last year of 40,652 bales; exports were 4,739,867 bales, an increase of 48,999 bales. Takings by Northern spinners, 1,538,533 bales, an increase of 36,781; by Southern spinners, 1,125,218 bales, an increase of 21,624 bales.

Textile Notes.

Elizabeth City (N. C.) Hosiery Mills has declared a dividend of 30 per cent.

Messrs. J. I. Suratt and E. S. Thompson, of Gaffney, S. C., have taken an option on a mill site at Earl, N. C., contemplating the erection of a cotton mill in that town.

Columbia Cotton Mill Co., Columbia, Tenn., will build a cotton gin in anticipation of the large amount of cotton to be raised in its section this year. The mill operates 7900 spindles and 200 looms.

Board of Trade, Cuthbert, Ga., is endeavoring to secure the location of a cotton mill in that town. Northern capitalists have made a proposition which, if accepted, will result in the establishment of a \$100,000 plant.

One of the leading glove-knitting companies of the North contemplates establishing a branch factory in the South, and has been corresponding with the North Georgia Electric Co., of Gainesville, Ga., relative to locating in that city.

Malee Knitting Mills Co., of Malee, N. C., has been incorporated with capital stock of \$10,000, acquires and will continue the established hosiery mill of G. C. Baldwin. The incorporators are Messrs. G. C. Baldwin and James A. Ingram, of Malee, and E. J. Ingram, of Mt. Gilead, N. C.

Winder Cotton Mills, of Winder, Ga., has decided to increase capital stock from \$81,000 to \$150,000, which means additional capital \$69,000. The company probably intends to invest the funds for enlargement, but no definite statement has been made. Present equipment consists of 5000 spindles, 260 looms, etc.

Messrs. W. C. Fields, of Mt. Wilson, Va.; E. F. McNeer, of Elkin, N. C., and associates, will establish the knitting

mill referred to recently. They will begin the construction of the building in June, and upon completion install 20 knitting machines for the production of hosiery.

Gibson Manufacturing Co., of Concord, N. C., has called a meeting of stockholders for February 25, to vote on issuing \$125,000 of 7 per cent. cumulative preferred stock. The purpose of this increase of capital is not stated, but probably enlargements are contemplated. Present equipment of the company is 15,850 spindles and 357 looms.

Eagle and Phenix Mills, Columbus, Ga., is receiving the final shipments of the \$15,000 worth of additional machinery, besides some other equipment, noted last November as having been contracted for. The new equipment includes a set of woolen cards, 672 woolen spindles, 16 woolen looms, carding machines, pickers, spinning frames, nappers, dye-house apparatus, etc.

It is reported that R. R. Hayne, president of the Cliffside Mills, of Cliffside, N. C., will build a cotton mill of 10,000 spindles at Henrietta, N. C. Further statements are to the effect that the contract for the necessary engineering work has been awarded to Messrs. Ladshaw & Ladshaw, of Spartanburg, S. C., but no authoritative statement has as yet been made.

Columbus (Ga.) and Northern capitalists propose building a \$250,000 cotton mill at North Highlands, Ga. They are now investigating and corresponding relative to the enterprise, with a view of closing negotiations and beginning construction work in the near future. E. N. Clemence, of Columbus, Ga., formerly treasurer of the Eagle and Phenix Mills of that city, is promoting the new enterprise.

Coosa Water Power Development Co. will be organized, with a capital stock of \$250,000, to develop water power and build an electric plant for transmission. Land and water-power rights on the Coosa river, in Calhoun county, have been purchased, and the construction of the necessary dam will begin soon. Manufacturing sites will be platted and a number of industries located, including a cotton duck mill which Eastern parties are now negotiating to build. The Industrial Finance and Trust Co., offices in First National Bank Building, Birmingham, Ala., is financing the enterprise.

Phosphates and Fertilizers.

Good prices obtained for cotton during this season have enabled farmers in the hill counties of Mississippi to invest more heavily than ever in fertilizers for the coming crop, and there is talk there of a rivalry with delta lands on that account. In Alabama during January there were sold 110,329 tons of fertilizers as against 76,615 tons in January, 1903, but the farmers' better financial condition is manifested not only in this increased fertilizer trade, but in their purchasing for cash better stock and their replenishing their supply of farm implements and machinery.

People around Centerville, Tenn., expect an increase in phosphate activity during the coming year, as several rather important deals have recently been made in their locality. One of them is the purchase by the Jareck Chemical Co., of Ohio, of phosphate deposits in Hickman county, and the plan of that company to build a cable car line from the deposits to a point on a railroad two miles distant where a rock drying plant is to be erected.

SAND AND LIME BRICKS.

Much Material for the Process in Different Parts of the South.

The process of making bricks from a mixture of sand and lime, which has been in use in Germany with success for twenty-five years, is being introduced in the United States. Several plants are in operation in the West, and others are now under construction in various sections of the country, among them one in Mobile, Ala., which is nearly completed and will make 20,000 bricks per day, using Gulf sand. The great advantage of the process is the saving in time which is made possible, as a brick molded one day is ready to be laid the next day, and no burning is necessary.

By this new process slaked or unslaked lime is thoroughly mixed with sand in proportions of from 5 to 15 per cent., according to the physical formation and chemical ingredients of the sand. The bricks are pressed in hydraulic or toggle joint presses, the material at the time of pressing being almost dry, and after pressing the bricks are loaded on to steel cars, which are pushed into a long retort or cylinder. When the cylinder is full the head is bolted into place and live steam is turned on, rising to a pressure of 125 pounds per square inch, and the bricks are subjected to this pressure over night. In the morning, when the hardening cylinder is opened, the bricks are hard enough to be put to their proper use. When this kind of brick was originally made in the Potsdam district in Germany, hardening was accomplished by exposure to the air for several months, but it was found that steam pressure did in a few hours what would require many weeks under the ordinary forces of nature.

The finished brick is, properly speaking, an artificial sandstone, or, technically, hydrosilicate of lime, the lime first acting as a bond between the grains of sand when subjected to pressure, and later combining chemically with the silica of the sand.

Frank H. Mason, Consul-General to Germany, recently made a report on the sand-lime brick industry of Germany, in which he quoted tests conducted at the Swiss Imperial testing station to show that sand-lime brick withstands extremes of cold, moisture and dryness, if anything, better than ordinary burned brick, and that buildings erected twenty years ago from this brick in the early days of the sand-lime brick industry in Germany, show that the sand-lime brick grows harder with age.

The cost of installing a plant is estimated to be on the basis of \$20,000 for a complete plant that will turn out 20,000 bricks daily, with a decrease in cost in proportion to output for larger plants, and somewhat of an increase in cost for plants with less output. The cost of making the brick itself, including the cost of lime, labor, fuel, etc., but not including cost of sand, ranges from \$2 to \$3.50 per 1000 brick, according to local conditions. The percentage and cost of lime also have a bearing on the cost of the brick, a loose, light, round-grained sand requiring a larger percentage of lime than sharp, heavy sand. The extremes are 5 to 15 per cent. lime.

It will be thus seen that brick by the sand-lime process can be sold in competition with the cheapest clay brick, while its makers state that its greater density, its sharpness, uniformity and regularity of outline, and frequently its beauty of grain, put it in the class of fancy bricks, to be sold in competition with dry pressed and repressed front brick, quoted from \$15 to \$24 per 1000.

MECHANICAL.

Plant of Edison Portland Cement Co.

Many new and novel features are embodied in the cement plant of the Edison Portland Cement Co., recently completed at New Village, N. J., and cement manufacturers, engineers and the engineering press have given considerable attention

cial and radically novel devices is evident not only from the operation as seen by the visitor, but also from the quality of the product and its low cost per barrel. A considerable portion of the machinery for crushing, grinding, conveying, etc.—in fact, practically the whole equipment of the plant except the rotary plant at Edison, N. J. The machinery

power engine at the crusher house, and from a jack shaft two generators are driven, these supplying the current for the several motors, driving hoists, conveyors, etc.

As it is essential that all parts of the system start together after a stoppage, the conveyor motors all start with the engine, avoiding the clogging which

diameter to about six feet. Each rotary is supported upon 30 wheels at 15 points of its length, and is revolved at a speed varying from one revolution in 35 seconds to one revolution in 40 seconds, according to the requirements of the material fed. Power for the rotation is derived from geared motors located about midway of the length of the kilns. The rotaries are, of course, inclined downward from the feeding end, the pitch being 0.32 per foot, or four feet total. They are held in place by two thrust wheels bearing against turned rings encircling the shell. The output of each rotary is normally about 750 barrels per day of 24 hours. The fuel used is pulverized coal fed into the lower end of each rotary by compressed air. The amount of fuel used is under 80 pounds per barrel of product. The feed is regulated by friction-driven screw conveyors of small size.

The clinker, formed by vitrification of the chalk as it works its way through the rotating kiln under the intense heat of the powdered coal flame, drops out at the lower end into a revolving cylindrical cooler.

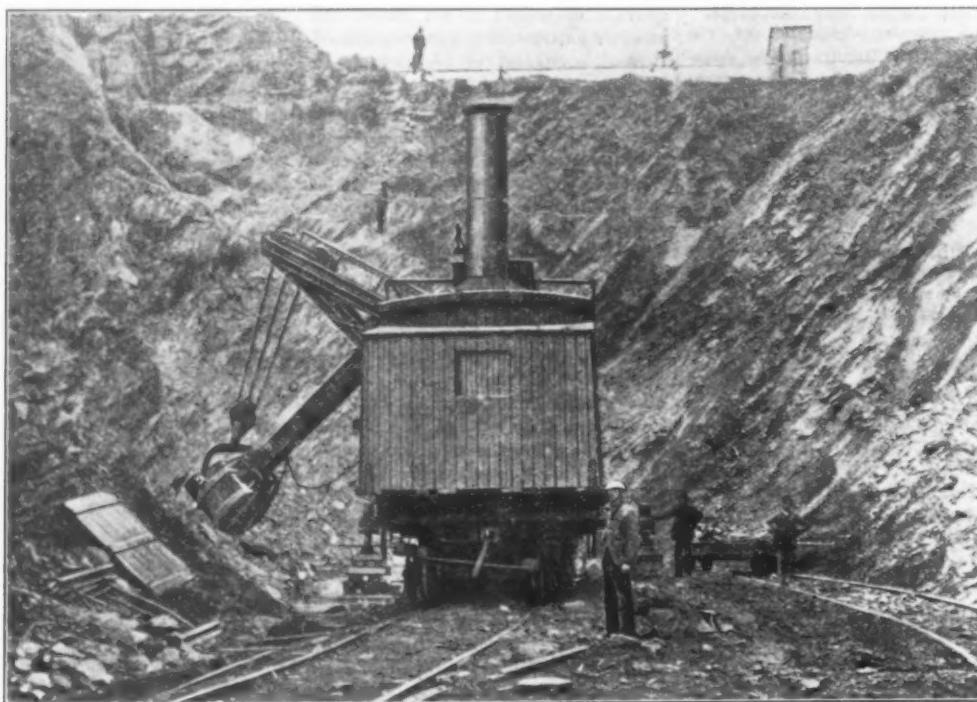
Power for the various engines is supplied at present by a battery of three 500 horse-power Climax boilers located in a building adjacent to the roaster house. In the space intervening between these buildings is located the air compressing equipment. Various outbuildings, such as office, laboratory equipment, oil house, storage sheds, etc., are conveniently located.

Dust, the universal enemy to maintenance of mechanical equipment in the cement plant, has been carefully guarded against in the Edison works by the adoption of various special features. One of the devices of greatest excellence is the "gunny chamber," within one of which is inclosed every motor throughout the plant. One of these chambers may be understood to be a framework of wood upon which are stretched several thicknesses of burlap, through which dust may hardly be expected to penetrate. In this case a dust-proof entrance vestibule of similar nature is used. This construction is not followed in all cases, however, well-fitting burlap-covered doors serving every purpose. Within each of these gunny chambers is an electric fan facing a circular opening in one of the walls and constantly maintaining an outward current of air from the interior. The effectiveness of the gunny chamber may be understood when it is stated that the interior air is entirely clear when the outer air is thoroughly dust laden. The outside of the chamber becomes rapidly coated with dust, which is readily swept off at intervals. All gearing involved in the motor connections runs in oil baths.

The surprising quality of the output of this plant may be understood when it is stated that a minimum of 85 per cent. will pass through a sieve of 200 meshes per linear inch. The plant now has a capacity of 1500 barrels per day of 24 hours, the operation requiring the labor of 300 men. For four rotaries, doubling the present output without exceeding the present capacity of any other department except that of raw material fine grinding, it is estimated that the labor cost of operation will be increased by only about 10 to 20 per cent.

The Edison Portland Cement Co. has its offices in the Girard Trust Building, Philadelphia, Pa.

(The Manufacturers' Record is indebted to the Iron Age for the two accompanying illustrations and a detailed description of the Edison plant, from which the foregoing is condensed.)



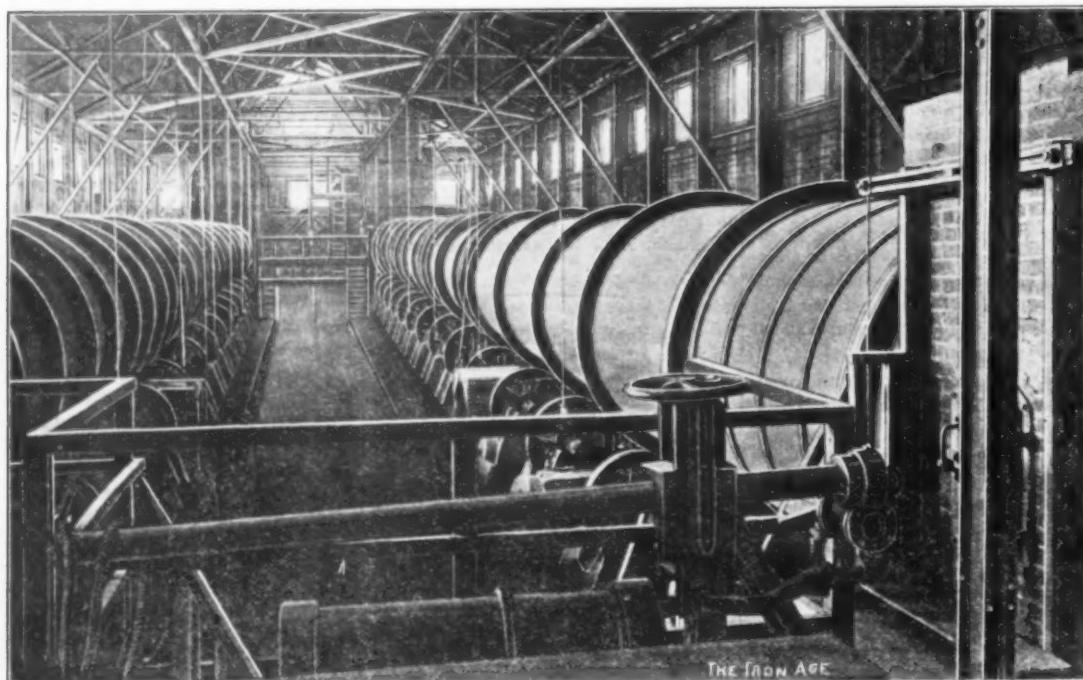
EDISON PORTLAND CEMENT CO.'S QUARRY.

to them. A visit to the plant strains the confidence of one familiar with the usual methods of cement production. From the crushing of the rock to the delivery of the finished product at the shipping house, especially designed machinery is in evidence.

is therefore largely an adaptation of the iron ore plant equipment to a new line of work.

The various departments include the quarries, the rock crusher house, the crushed rock drying house, the rock stock kilns—was developed at the iron ore

would otherwise result. The engine is about 1000 feet from the boiler plant, steam being conveyed by piping in a tunnel 12x12 feet in section and 1600 feet long, running practically full length of the plant and containing besides piping and wiring systems the conveyors be-



ROASTER HOUSE—EDISON PORTLAND CEMENT CO.

The belt conveyors differ from the common forms in essential points of design and operation. Even the belt pulleys, ordinarily simple items of standard product, are here built upon plans which brought smiles to the countenances of power transmission machinery makers when the drawings were submitted for bids upon the work. The efficient and satisfactory performance of all these spe-

house, the small rock stock house, the roaster house and rotary kilns, the cement stock house, the coal drying and pulverizing plant, the power and transmission equipment, etc. Accompanying illustrations present views of the roaster house and one of the quarries.

The complete set of rock crushing rolls has a capacity of 3000 tons per day. The power equipment includes a 500 horse-

tween various departments.

To one familiar with the usual size of rotary kilns those at the Edison works are certainly surprising. While the usual form of kiln is constructed of steel plate, with a diameter of six feet and a length of 60 feet, the Edison kilns are built of cast iron, 150 feet long and from eight to nine feet in exterior diameter. The lining of fire-brick brings the interior

The Scott Clay Pulverizer.

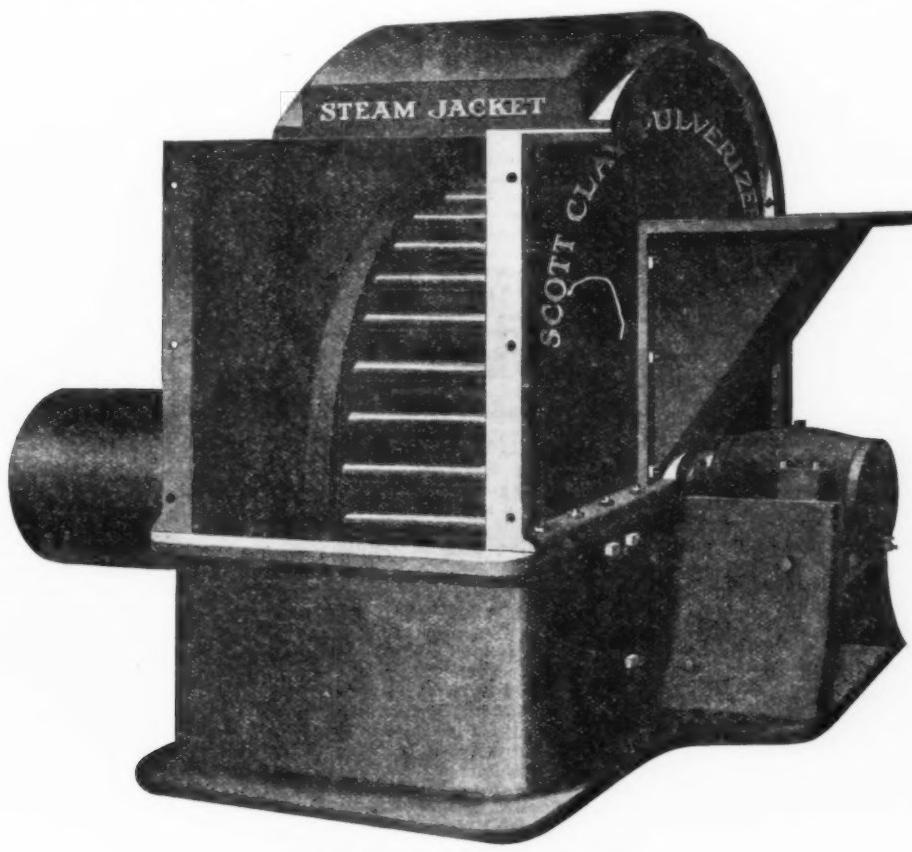
Clay workers will find the accompanying illustration of the Scott clay pulverizer of interest. Not that the idea of the machine is a new one, for the cylinder or double case pulverizer has been in use

boiler, or 45 tubes in the marine boiler, may be cleaned through a single hand hole. Thus in a 250 H. P. boiler it is required to remove the covers from only 12 hand holes to get at the entire number of 340 tubes.

lower drum of the feed-water heater, from where it passes up through the tubes to the upper drum of the heater, and from there is piped to the steam drum of the boiler and distributed through the larger return pipes (that

be stronger and more durable, as well as possessing higher heat-resisting properties, than ordinary fire-brick).

The fire-box blocks are tongued and grooved, and are made in sizes 12 and 18 inches high and six inches thick. When in place they make a wall the height of the fire all around the fire-box, and this wall remains smooth and solid, whereas when ordinary small fire-brick is used there is often a tendency for the clay to shrink, thus opening spaces which encourage the accumulation of clinkers. It is said the "Steel Mixture" arches will not fuse until a temperature of 4000 degrees F. is reached, which is nearly twice the degree of heat that the iron furnace-door arches will stand. "Steel Mixture" fire-brick has been applied extensively, and is reported to have proved highly successful. An accompanying illustration shows the new material in position.



THE SCOTT CLAY PULVERIZER.

for some years, but because of the improvements introduced. The entire machine is built with an idea to durability. Its bed-plate is one of solid castings, leaving no play to the corners or sides; the pins are made of 1½-inch steel shafting, and so set that they can be removed and replaced at small expense; the steam jacket prevents the carbon or condensing of the clay at the back of the frame. This pulverizer is built by the Scott Manufacturing Co., of Keokuk, Iowa, which also manufactures the Andrus brick press and the Scott clay mixer.

Mosher Stationary Boiler.

The Mosher boiler is widely known and extensively used for marine purposes, and is equally well adapted for stationary purposes. An accompanying illustration presents a view of the stationary type. This boiler is particularly adapted where the water used is laden with large

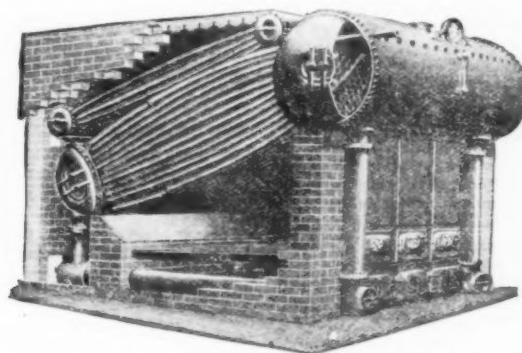
An important factor in keeping the boiler clean is the addition of a feed-water heater, which not only adds greatly to the economy of the boiler, but retains in the heater the larger part of the impurities in the water. It is well known that the sediment or scale-making matter will not be held in solution, but will be thrown down as the temperature of the water is raised—that is, the limes will be precipitated when the water reaches about 240 degrees, the silica and other matter at upward of 260 degrees. Very little of this sediment, however, is precipitated until the water has been heated to a temperature in excess of 212 degrees, which is the practical limit in an open heater; therefore it fails to prevent the impurities reaching the boiler. The feed-water heater on the Mosher boiler effectually accomplishes the desired effect. The special features of construction are similar to the boiler proper. The great facility with which it can be

support the steam drum), thence through the large pipes shown on each side below the grate, then up through the large pipes supporting the water drums, from where it passes directly into the tubes, the angle of which it will be seen is about double that of many other boilers. This construction allows every bubble of steam that forms to pass directly to the steam drum, there being no tortuous passages or pockets for the steam to collect in. The large diameter of the steam drum provides an ample amount of steam room and releasing area.

The Mosher Water Tube Boiler Co., No. 1 Broadway, New York, build this boiler.

Boiler Appliances.

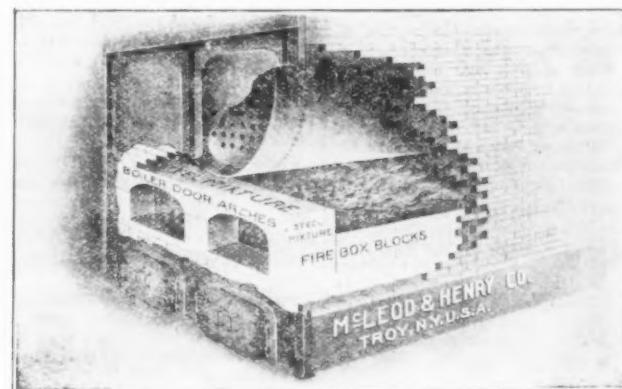
A new material for the construction of fire-boxes and furnaces has been developed.



THE MOSHER STATIONARY BOILER.

quantities of impurities and scale-making matter, on account of the great convenience for cleaning and repair. This is realized in the fact that as many as 30 of the large tubes used in the stationary

cleaned leaves no reasonable excuse for not keeping it clean, as well as the boiler, at all times, and thereby enabling the boiler to realize the highest efficiency. The feed water is first delivered into the



STEEL MIXTURE FOR FIRE-BOXES AND FURNACES.

developed and is now made by the McLeod & Henry Co., Troy, N. Y. The material, which is known as "Steel Mixture," is formed in fire-box blocks and boiler door arches ready for use, and is claimed to

Correspondence on the subject is invited. The manufacture of oil mill machinery is contemplated, and information regarding this will be considered, but nothing definite has been decided.

CONSTRUCTION DEPARTMENT.

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY.

The Manufacturers' Record seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

ALABAMA.

Aniston—Medicine Factory.—Long Life Remedy Co. will increase capital from \$5000 to \$10,000 and enlarge its manufacturing plant.

Bessemer—Steam Laundry.—R. M. Mingeau has purchased Savoy Laundry and will improve same, adding considerable new machinery. Contract for machinery is reported to have been awarded.

Birmingham—Construction Co.—Incorporated: Evans Bros. Construction Co., capitalized at \$5000, by D. F. Evans, J. F. Evans and others.

Birmingham—Coffin Factory.—A Chattanooga (Tenn.) coffin manufacturer will establish a coffin factory. The Commercial Club of Birmingham can possibly give information.

Birmingham—Steel Plant.—Pittsburg & Southern Coal & Iron Co. contemplates building the iron furnaces and steel mill referred to last week. Extent of investment not determined as yet. Offices at 616 Bijou Building, Pittsburg, Pa., and Swann Building, Birmingham. Walter Kennedy at the Pittsburg office is engineer in charge.

Birmingham—Water Power Developments and cotton Mill.—Coosa Water Power Development Co. will be organized with capital stock of \$250,000, to develop water power, build electric plant, etc. Eastern capitalists proposed building cotton mill to utilize the power obtained. Industrial, Finance & Trust Co., offices in First National Bank Building, is financing the power company.

Birmingham—Street-car Works.—Southern Street Car Mfg. Co., reported recently, has let contract to C. C. Totherow for erection of first building for its plant. Structure will be 150 x 250 feet in size, of structural steel, foundations of concrete. Company's capital is \$50,000 with privilege of increase to \$500,000, as stated lately. W. G. Plankinton, offices in First National Bank Building, president.

Birmingham—Coke Ovens.—Sayre Mining

& Mfg. Co., has let contract to J. M. Meighan for the construction of 100 coke ovens, and it is reported contemplates contracting for another battery of ovens.

East Lake—Electric Light Plant.—Issuance of bonds for the erection of electric light plant talked of. Address the Mayor.

Evergreen—Brick Works.—Evergreen Fire Brick Co. will add machinery for manufacturing stiff mud bricks, daily output to be 12,000 to 18,000.

Jasper—Telephone System.—E. M. Cranford, reported recently as organizing company to establish telephone system, will probably invest \$5000. A 300-instrument system is contemplated.

Mobile—Candy Co.—Incorporated: Stephens Candy Co., capitalized at \$5000, by Stephen Stephens, Benjamin West and Florence Stephens.

Mobile—Dry Docks Company.—Bruce Olinger Dry Docks Co. has increased capital from \$40,000 to \$75,000.

Mobile—Hardware.—Incorporated: Young Hardware Co., capitalized at \$75,000, with H. Young, president; William K. McIntosh, secretary, and F. W. Young, treasurer.

Ozark—Sewer System.—The town will construct a small sewer system during the year. Marvin McDonald is city engineer.

Scottsboro—Phosphate Mines.—W. B. Loweman is said to have interested Cleveland (Ohio) capitalists in phosphate deposits, with a view of developing.

Selma—Stove Foundry.—L. E. Jeffries and associates are endeavoring to form company with capital of \$20,000 for erection of stove foundry.

ARKANSAS.

Augusta—Cotton Gin.—Farmers' Gin Company has been incorporated with capital of \$12,000 and H. F. H. Eberts, president; W. H. Haynes, vice-president, and George A. McLean, secretary.

Cotton—Lumber.—Chartered: Charles Pease Lumber Co. with \$20,000 capital. C. M. Pease is president; A. M. Pease, vice-president, and C. O. Pease, secretary and treasurer.

El Dorado—Cotton Oil Mill, etc.—El Dorado Cotton Oil Co. will expend about \$5000 to build its granary addition reported recently. Gin's capacity will be 30 to 40 bales daily. A 16-box press will be added for the oil mill.

Fayetteville—Lumber and Cooperage Company.—F. D. Field, W. J. Reynolds, C. Dowell and others have incorporated Field, Reynolds Lumber & Cooperage Co. with capital of \$40,000.

Jonesboro—Publishing.—Times Enterprise Co. has been incorporated with \$10,000 capital, for the publication of daily and weekly newspaper. A. L. Malone, president; Harry L. Williams, secretary, and W. D. Cobb, treasurer.

Little Rock—Construction Co.—Incorporated: Fort Smith Construction Co., capitalized at \$5000, by Michael Kelly, H. Kelly and Louis Reiman.

Little Rock—Ice Plant.—Report of last week referring to D. B. Hull as organizing company to build ice plant was entirely in error. As a matter of fact Mr. Hull has been operating a plant for nine years.

Little Rock—Saddlery Plant.—Voss-Barbee Mfg. Co. has let contract for erection of factory building, 100 x 150 feet, three stories high.

Little Rock—Saddlery and Harness Factory.—Voss-Barbee Mfg. Co. has purchased site and will erect three-story brick factory and office building, 100x150 feet, at a cost of \$20,000. Company also contemplates installing equipment for the manufacture of carriages.

Marshall—Canning Co.—Chartered: Marshall Canning Co., with \$6000 capital. Sam. G. Daniel is president, M. C. Cantrell, vice-president, and W. F. Reeves, secretary and treasurer.

Marvell—Cotton Oil Mill.—W. J. Martin, L. Kahn, S. L. Cooke and H. Newman will organize company with capital of \$30,000 to build 40-ton cottonseed oil mill.

Pigott—Mercantile.—Bruce-Brown Mercantile Co. has been incorporated with capital of \$20,000. H. O. Brown, president, and W. E. Williams, secretary.

Plumerville—Mercantile.—A. R. Bowdre & Co., capitalized at \$12,000, has been incor-

porated by A. R. Bowdre, A. J. Nesbitt, A. B. Payne and others.

Roland—Lumber Plant.—Roland Shingle & Lumber Co. has been incorporated with capital of \$25,000 for manufacturing shingles, lumber, etc. J. H. Haizlip, president; W. W. Moore, vice-president, and M. H. Haizlip, secretary.

Texarkana—Ice-cream Factory.—J. B. Amons & Co. have let contract for erection of building to cost \$2500, which will be equipped for manufacturing ice cream. Electricity will be used as motive power.

FLORIDA.

Jacksonville—Barrel Factory.—Jacksonville Cooperage Co. will erect new building and install additional machinery for increasing the capacity of plant. Present capacity, 300 barrels per day, will be tripled.

Lake City—Starch Factory.—Gulf State Refining Co., reported to have home offices at New Orleans, La., will build plant for manufacturing starch from the cassava root, investing about \$80,000. E. L. Greer, G. W. Waldron and others, of Lake City, are the committee on information.

Molino—Brick Plant.—McMillan Brick Co. of Pine Barren, Fla., will invest \$35,000 to establish the plant mentioned last week. Output to be both pressed and building brick.

Pensacola—Turpentine Plant.—Standard Turpentine Co., of Waycross, Ga., contemplates building branch plant.

Pensacola—Brick Works.—Pensacola Brick Co., reported incorporated last week with a capital of \$30,000, has let contract for all the machinery needed for its plant of 20,000 daily capacity. Sand lime brick will be manufactured.

Tampa—Hardware.—John I. Robles and associates have incorporated Robles Hardware Company with capital of \$25,000.

GEORGIA.

Abbeville—Water Works.—City contemplates contracting for construction of six miles of water piping. E. H. Williams is mayor.

Atlanta—Steel Viaduct.—Plans for the city's proposed steel viaduct over the Southern Railway tracks have been completed by R. M. Clayton, city engineer. Arrangements to call for bids will be made soon. About \$75,000 will be expended.

Augusta—Paper Mill.—It is reported that Indiana capitalists will establish paper mill. Chamber of Commerce can give information.

Canton—Telephone System.—J. W. Jarvis, W. B. Puckett, A. A. Fincher and E. W. Coleman have incorporated Canton Telephone Co., with capital of \$25,000; authorized to establish system.

Cartersville—Mercantile.—Chartered: Wholesale Mercantile & Cotton Co., capitalized at \$40,000, by John P. Lewis, James W. Knight, Robert H. McGinnis and others.

Columbus—Refrigerator Factory.—John F. Weathers and Ernest L. Hill will establish refrigerator factory, but are now having refrigerators built by contract. A factory building will be erected soon.*

Columbus—Printing Plant.—Southern Workmen Publishing Co. has obtained its charter and elected Will H. Winn, president; J. R. England, vice-president, and W. J. Kelly, secretary. A printing plant to be operated by electricity will be established. Capital is \$10,000. Offices at 113 Tenth street.

Cuthbert—Cotton Mill.—Board of Trade is in receipt of a proposition from Northern cotton manufacturers for the establishment of a \$100,000 cotton mill.

Douglas—Grocery.—Douglas Wholesale Grocery Co. has been organized with a capital of \$30,000. Frank L. Sweat, president; John McLean, vice-president; E. L. Tanner, secretary and treasurer.

Gainesville—Glove Factory.—North Georgia Electric Co. has received a proposition from Northern manufacturers relative to the establishment of cotton glove factory.

Glenville—Furniture Factory.—W. T. P. Geiger will establish the furniture factory reported recently; plant to be small one at the start, for producing school desks, kitchen furniture, etc.

Jonesboro—Electric Light Plant.—The

town contemplates issuing bonds to equip an electric light plant. Address the mayor.

Jonesboro—Electric Light Plant.—City has voted the issuance of bonds for constructing the electric light plant recently reported as proposed. D. P. Nelson is mayor.

Lithonia—Granite Quarries.—W. H. Patterson, Frank H. Reynolds, W. S. Brown and others, of Atlanta, Ga., will open marble quarries.

Nashville—Lumber Plant.—Barfield & Brewer, of Unadilla, Ga., have purchased 3400 acres of timber land at \$34,000, and will build saw mills.

North Highlands—Cotton Mill.—Eastern and local capitalists will organize \$250,000 stock company to build cotton mill. E. N. Clemence, of Columbus, Ga., is promoting the enterprise.

Ocilla—Electric Light Plant.—City has sold \$15,000 of bonds recently issued for electric light plant, and will at once arrange to construct the system. Address the mayor.

Rome—Foundry and Machine Shop.—Georgia Foundry & Machine Co. has been incorporated by Cornelius Terhune and Jerome S. Brown with capital stock of \$30,000. They were recently reported as having purchased and to enlarge an established plant.

Sandersville—Water Works.—City has awarded contract to J. H. McKenzie & Son, of Augusta, Ga., for erection of electric light previously reported, cost to be about \$40,000.

Savannah—Ice Plant.—W. W. Aimar & Co. intend to build ice plant of 25 to 30 tons capacity daily.

Savannah—Electric Supplies.—Chartered: The Electric Supply Co., capitalized at \$25,000, to deal in electrical supplies, by Joseph S. Walker, C. H. Sawyer, David Wesson and others.

Thomasville—Electric Light Plant.—City contemplates arranging to build electric light plant. Address the mayor.

Valdosta—Cigar Factory.—Rodrigues Cigar Co. will increase capital \$5000, to enlarge its factory.

Vidalia—Electric and Ice Plants.—John W. Wiggins, of Savannah, Ga., has received franchise for establishment of ice and electric light plants. He is reported to be in New York purchasing the machinery.

Winder—Cotton Mill.—Winder Cotton Mills will increase capital by \$60,000 and enlarge its plant; at present has 5000 spindles and 200 looms.

KENTUCKY.

Hopkinsville—Furniture Factory.—A. W. Pyle and others will incorporate company with capital of \$25,000 to establish furniture factory.

Lexington—Tobacco Factory.—Bluegrass Tobacco Co., recently reported as increasing capital from \$30,000 to \$50,000, will install considerable additional machinery. Capacity for plug, twist and smoking tobacco will be 4000 pounds daily.*

Lexington—Cold Storage Plant, etc.—East Tennessee Brewing Co. will erect 40x100 foot building and install cold storage plant and bottling equipment.

Lexington—Water Mains.—Franchise has been granted the Lexington Hydraulic & Mfg. Co. for laying 16-inch water main from reservoir pumping station to city limits.

Louisville—Road Construction.—The Fiscal Court will advertise for bids on reconstruction of Shelbyville and Bardstown pikes, the cost to be from \$12,000 to \$15,000.

Marion—Lead and Zinc Mines.—Louisville Spar, Lead & Zinc Co. has been incorporated with capital of \$25,000 to develop lead, zinc and spar properties.

Midway—Distillery.—It is reported that Thomas Pepper, of Lexington, Ky., will erect distillery for manufacturing sour-mash whiskey.

LOUISIANA.

Hosston—Cotton Gin.—A. R. Thompson & Son will rebuild their cotton gin, recently burned. All necessary machinery has been ordered. Capacity will be 40 bales per day.

New Orleans—Carbonic-gas Plant.—Crescent City Carbonate Co. will increase its capital and enlarge plant.

New Orleans—Iron and Steel Specialties.—Standard Belt & Mfg. Co., of Alliance, Ohio, contemplates removing its plant, cap-

italized at \$100,000, to some Southern city, and is investigating New Orleans. It manufactures air brick, knuckle pins, car forgings and other specialties in iron and steel.

New Orleans—Sewer System.—City has awarded contract to Irwin Bros. at \$311,977.50 for sewer work; to A. L. Patterson & Co. at \$280,552.15 for sewer work, and to United States Cast-Iron Pipe & Foundry Co. at \$73,465.35 for furnishing cast-iron piping. This work is to be done in connection with the extensions and improvements to the municipal sewerage system previously reported, and for which bids have been invited for several months. About 66 miles of sewers are involved.

New Orleans—Rice Mill.—Hunter Rice Mill Co., Ltd., has been incorporated with a capital of \$100,000 to build and operate rice mills. W. H. Hunter, Jr., president; J. J. Gasquet, vice-president; W. H. Ingram, Jr., secretary.

Norwood—Mercantile.—Chartered: Norwood Mercantile Co., capitalized at \$20,000, with T. D. Street, manager.

White Castle—Barrel Factory.—R. H. Dowman will organize company with capital of \$25,000, to establish barrel factory.

Rayne—Cotton Oil Mill.—E. J. Chappius, Mervin Kahn and associates, reported recently as contemplating the establishment of cottonseed oil mill, have decided to build 50-ton plant.

MARYLAND.

Baltimore—Dessert Factory.—American Dessert Co., Incorporated last week, with \$10,000 capital, will establish plant for manufacturing quick desserts. Address 117 South street.*

Baltimore—Electric Power Plant.—The United Railways & Electric Co. has let contract to John Waters, Centre and St. Paul streets, for rebuilding its power house, the building work to cost probably \$125,000. The building and mechanical plant, before the fire, was valued at \$500,000. Railways Company's temporary offices are in Maryland Telephone Building.

Baltimore—Plumbers' Supplies Factory.—James Robertson Mfg. Co., Howard and Henrietta streets, has let contract to John Waters, Centre and St. Paul streets, for erecting buildings for its plumbers' supplies factory, which plant was destroyed by the recent fire.

Baltimore—Printing Plant.—Evening News Publishing Co. has let contract to John Waters for remodeling building for its purpose and purchased new printing plant for newspapers, expending about \$150,000 for the equipment.

Baltimore—Printing Plant.—Fleet-McGinley Co. has secured accommodations at Saratoga Co., offices at 11 E. Saratoga street, expect to rebuild their grain elevators, destroyed by the recent fire.

MISSISSIPPI.

Aberdeen—Electric Light & Power Plant.—Aberdeen Electric Light & Power Co. has been incorporated with \$15,000 capital by Edwin M. Jones, Jackson K. Jones, C. L. Tubb and others.

Baldwyn—Ice Plant.—Planters' Gin & Oil Co. has let contract for erection of ice plant.

Belzoni—Electric Light and Water Plants.—City has accepted plans and specifications for its proposed water works and electric light plant for which \$20,000 has been provided, as reported recently. Plans, etc., are now on file with S. Castleman, mayor.

Gulfport—Sewerage System.—City has decided to issue \$6000 in bonds to begin construction of complete sewerage system. Address the mayor.

Jackson—Concrete Pavements.—Reports state that Miller Paving Co., of Memphis, Tenn., has contract for constructing concrete pavements, the municipality having awarded same.

Jackson—Wood-working Plant.—Jackson Hardwood Co., of Jackson, Tenn., will remove its plant to this town, where it has had an experimental plant. Staves, barrel heads, etc., will be the product.

Jackson—Publishing.—H. E. Blakeslee, J. D. McElroy and Gerrard Harris will organize company with capital of \$50,000 to publish morning newspaper.

Laurel—Brick Plant.—C. G. Kershaw and W. H. Love, of Talladega, Ala., contemporaneous, of Columbus, Ga., is promoting the enterprise.

Lucedale—Cannery.—F. H. Tonsmire will organize company with capital of \$10,000 to build cannery.

Macon—Bottling and Ice Plant.—Macon Ice, Bottling & Mfg. Co. has been organized with capital of \$10,000, to manufacture ice and carbonated beverages and bottle the beverages. H. J. Barnes, secretary-treasurer.

Meridian—Coffin Factory.—S. A. Neville and associates have organized company to establish coffin factory, to be capitalized at \$10,000.

Meridian—Lumber Plant.—Weatherbee & Rivers Lumber Co. has been organized to establish an extensive lumber plant, manufacturing all kinds of building material, by C. P. Weatherbee, W. C. Weatherbee and T. E. Rivers.

Meridian—Oil Mill.—Meridian Fertilizer Factory states there is no truth in reports saying it will double plant.

New Albany—Cotton Mill.—Business League is forming company to build cotton mill of 4000 spindles.

MISSOURI.

Columbia—Water Works and Electric-light Plant.—City's proposed issuance of \$100,000 in bonds for purchase of Columbia Water & Light Co.'s plant, recently referred to as proposed, will provide \$67,000 for purchase price and \$33,000 for improvements. Address the Mayor.

Kansas City—Grain Elevators.—R. J. House Co., 767 Girard Building, will build grain elevator, 48 by 48 by 100 feet, for capacity of 60,000 bushels, to cost \$25,000. Plans have been prepared by F. E. Parker & Son, Kemper Building.

Kansas City—Hardware.—Edward B. Simms, George Boles and others have incorporated Simms Hardware Co., with capital of \$12,000.

Moberly—Railroad Machine Shops.—Wabash Railroad will expend \$50,000 for installation of additional new machinery in its shops. J. S. Goodrick is division superintendent.

Standberry—Electric-light Plant.—James T. Norman, Alvin C. Froebie and Thomas D. Hussey have incorporated Standberry Electric Light Co. with a capital of \$25,000.

St. Joseph—Coal Company.—James W. Atwell, Clavin C. Hyatt and Theodore Steinacker have incorporated Hyatt Coal Co. with capital of \$10,000.

St. Louis—Mercantile.—Sidney M. Schoenberg, of St. Louis; Joseph E. Schoenberg, of New York; Louis D. Schoenberg, of Cleveland, O.; and others, have incorporated May Mercantile Co. with capital stock of \$500,000.

St. Louis—Shoe Factory.—Johnnansen Bros. will erect four-story building, 120x300 feet, and install machinery for daily output of 3500 pairs of shoes. Plant to cost over \$100,000.

St. Louis—Paint and Oil.—W. H. Marten, J. G. Vahle, F. A. Koch and William Herms have incorporated Koch-Marten Paint Co. with capital of \$3000.

St. Louis—Electrical and Construction.—Charles G. Dlemunsch, William Gottlieb and Joseph Block have incorporated Municipal Electrical Construction Co. with a capital of \$50,000.

St. Louis—Shoe Factory.—Brown Shoe Co. will build an additional factory, four stories high, 60x300 feet, and install machinery for a daily output of 7000 to 10,000 pairs of shoes.

St. Louis—Pharmaceutical Company.—Hugh E. Thompson, Fred J. Gould, John Montgomery and associates have incorporated Dr. H. E. Thompson Pharmaceutical Co. to manufacture toilet articles. Capital \$60,000.

St. Louis—Bottling Plant.—Empire Brewing Co. will build bottling plant, 80 by 140 feet, two stories, electric freight elevators, steam heat, etc., to cost \$12,000. Plans have been prepared by E. C. Jansen, Chemical Building.

St. Louis—Fire-clay Works.—F. W. Hodfield, W. R. Hollis and J. H. Studman have incorporated Oak Hill Fire-clay Co., capitalized at \$20,000, for manufacturing fire-clay products.

St. Louis—Dairy Lunch.—Incorporated: World's Fair Dairy Lunch Co., capitalized at \$60,000 by J. F. Conrad, John F. Byrnes and others.

St. Louis—Dairy.—Chartered: Home Dairy Co., capitalized at \$10,000, by Chas.

E. Kirkpatrick, George Eggeman and others.

St. Louis—Screen Factory.—Joseph F. Hickey, Max Kolf and Adolph Lachman have incorporated Kolf Screen Co., for manufacturing window and door screens. Capital stock of \$20,000.

St. Louis—White Lead, etc.—E. W. Merck White Lead Co. has been incorporated with capital of \$25,000 by S. T. G. Smith and associates.

NORTH CAROLINA.

Asheboro—Marble Works.—Fred G. Barber, of High Point, N. C., will establish branch marble works.

Castle Hayne (Post Office at Wilmington)—Lumber Plant.—Independent Mfg. Co. has been incorporated with capital of \$50,000 to establish lumber plant reported last week. W. H. Shear, of Castle Hayne; Robert G. Grady, of Wilmington, and others are the incorporators.

Charlotte—Electric-light Plant.—Catawba Electric Power Co. has received franchise to light the city from its water-power developments, and will build a sub-station near Charlotte.

Charlotte—Brick Works.—Charlotte Brick Co. will increase capital from \$50,000 to \$100,000.

Charlotte—Water Works.—Board of Water Commissioners has completed arrangements to begin work on construction of additional water plant to cost \$60,000.

Cliffside—Cotton Mill.—Cliffside Mills will build an addition, Ladshaw & Ladshaw, of Spartanburg, S. C., having been engaged as engineers in charge.

Concord—Cotton Mill.—Gibson Manufacturing Co. will vote on an increase of capital by the issuance of \$125,000 preferred stock, probably for enlargements to plant; at present has 15,850 spindles and 357 looms.

Concord—Electric Light Plant.—City Council is considering the advisability of constructing electric-light plant, and \$18,000 has been mentioned as the approximate amount required. An established local plant may be purchased. Address the Mayor.

Concord—Grocery.—Incorporated: Concord Wholesale Grocery Co., capitalized at \$100,000, by H. L. Parks, W. C. Houston and others.

Earl—Cotton Mill.—J. I. Suratt and E. S. Thomason, of Gaffney, S. C., propose building cotton mill.

Elkin—Knitting Mill.—E. F. McNeer, W. C. Fields and others will establish knitting mill, equipment to be 20 machines for manufacturing hosieries.

Forest City—Machine Company.—Incorporated: Rotary Machine Co., capitalized at \$50,000, by L. R. Flack, of Shelby, N. C.; J. T. Moore, of Clover, Va.; W. S. Nash, of Red Stone, N. H., and others.

Greensboro—Electric-light Plant.—Greensboro Electric Co. contemplates making extensive improvements to its plant.

Goldsboro—Furniture Factory.—Goldsboro Furniture Mfg. Co. will increase capital to \$150,000 and enlarge factory.

Goldsboro—Electric-light Plant.—City will expend \$10,000 for permanent improvements to electrical-light plant. Address the Mayor.

Henrietta—Cotton Mill.—It is reported that R. R. Hayne, of Cliffside, N. C., will build a \$10,000 spindle mill and that contract for the engineering work has been awarded to Ladshaw & Ladshaw, of Spartanburg, S. C.

High Point—Furniture Factory.—Tomlinson Chair Mfg. Co. will not build factory structure, last week's report having been an error. See under "Building Notes."

Lincolnton—Water and Sewerage Plants.—City has voted \$30,000 in bonds for construction of water works and sewerage system. Address the mayor.

Lucama—Fishing Pond.—Chartered: Dixie Fishing Pond Co., capitalized at \$2000, to build artificial lake and stock it with fish, by Wiley Mercer, A. J. Lamm, A. B. Scott and others.

Lumberton—Bank Building.—Bank of Lumberton has engaged McMichael & Hunter, of Charlotte, N. C., to prepare plans and specifications for its bank building recently reported as to be erected.

Lumberton—Cotton-oil Mill.—D. A. Tompkins Co., engineers, Charlotte, N. C., will submit plans and specifications for the construction of a cotton-oil mill.

Malee—Knitting Mill.—G. C. Baldwin and James A. Ingram, of Malee, and E. J. Ingram, of Mt. Gillett, N. C., have incorporated Malee Knitting Mills Co., with capital of \$10,000, to continue an established plant.

Manson—Corn Mill and Steam Plant.—Horner Supply Co. will build steam plant for roller flour mill and a corn mill for meal.

Mebane—Bedding Factory.—Mebane Bedding Co. has been organized with capital of \$10,000, to manufacture bed springs, mattresses, cots, etc. G. D. Vincent, president; W. W. Corbett, secretary-treasurer.

Monroe—Printing Plant.—Monroe Journal, plant recently burned, will erect two-story brick building and install complete outfit for job and newspaper printing.

New Bern—Brick and Lumber Company.—J. W. Stewart, New Bern, N. C., G. T. Eubanks, Clarks, N. C., and C. H. Wetherington, Tuscaroro, N. C., have incorporated Enterprise Brick, Tile & Manufacturing Co. with an authorized capital of \$25,000.

Oxford—Electric Light and Water Plant.—Town Commissioners are considering a proposition for the establishment of electric-light and water plant.

Raeftord—Mercantile.—J. F. McPhail, Neil S. Blue, both of Raeftord, and James A. Blue, of Timberland, N. C., have incorporated McPhail & Blue Co. with capital of \$20,000.

Raleigh—Turpentine Plants.—W. C. Douglas and W. B. Douglas, of Raleigh, and A. C. Bethune, of Biscoe, have incorporated Pine Bluff Construction Co. with capital of \$100,000, to erect plants to extract spirits of turpentine and other products from pine wood, etc.

Raleigh—Knitting Mill.—C. G. Boddin, E. J. Ingram and James A. Ingram have incorporated Malle Knitting Mill Co. with capital of \$10,000.

Raleigh—Turpentine Plants.—Pine Belt Construction Co. has been organized with capital of \$100,000, to erect plants for extracting spirits turpentine from pine wood. Plants will be built in capacities from 80 to 230 gallons daily. A. C. Bethune, of Biscoe, N. C., is engineer in charge, but can be addressed care of company at Raleigh. W. C. Douglas is manager.

Rutherfordton—Saw Mills, Timber Land, Etc.—J. Middleby, Jr., of Boston, Mass., who recently purchased 23,000 acres of timber land, is arranging for developing the property, and will build a number of saw mills, later establishing sheep and cattle farms. Mr. Middleby is also of City Point, Fla.

Salisbury—Distillery.—W. L. White, Winston, N. C., W. A. Bailey, Advance, N. C., and G. Y. Broadnax, Greensboro, N. C., have incorporated Rowan Distilling Co. with an authorized capital of \$25,000.

Winston—Salem Stock Co.—Chartered: Farmers' Stock Co., capitalized at \$12,000, by F. E. Shannon, R. C. Leinback and others.

Sanford—Mercantile.—E. D. Noll, T. B. Gunter and others have incorporated Hunter Mercantile Co. with capital of \$50,000.

Wadesboro—Springs Company.—George W. Huntley and others have incorporated Rocky River Springs Co. with capital of \$25,000.

Waynesville—Improvement Company.—Chartered: Haywood County Stock Improvement Co., capitalized at \$10,000, by R. L. Allen, L. E. Perry, J. E. Rogers and others.

Williamston—Veneer Factory.—Chartered: Southern Veneer Co., capitalized at \$10,000, for manufacturing veneers, by N. S. Peel, A. S. Terry and C. R. White.

Winston-Salem—Lumber Manufacturing.—Incorporated: Smith-Phillips Lumber Co., capitalized at \$75,000, of which \$15,000 is paid in, for manufacturing lumber, by W. D. Smith, W. L. Teague, J. H. Phillips and others.

Winston-Salem—Tobacco Factory.—Brown & Williamson will erect addition to their factory two stories high, 20x150 ft.

SOUTH CAROLINA.

Aiken—Kaolin Deposits.—Dispatches state that A. C. Zacharias, of Pittsburg, Pa.; Andrew Carnegie, of New York; Nelson A. Miles, of Washington, D. C., and A. A. Pope, of Hartford, Conn., have purchased from F. R. Henderson, of Aiken, at \$30,000, some 350 acres of kaolin lands, intending to develop the property and establish plants for manufacturing aluminum products.

Gratwick—Kaolin Beds.—United States Steel Corporation (offices in New York City) has purchased, it is stated by dispatches, kaolin beds that are rich in aluminum ore, and the latter are to be utilized. Price reported at \$25,000.

Pickens—Timber Lands.—It is reported that Ira Knapp, of Iowa, has purchased 15,000 acres of timber land in Pickens and Oconee counties, intending to develop same by lumber manufacturing.

[February 18, 1904.]

TENNESSEE.

Chattanooga—Ice Plant.—It is reported that M. H. Ward contemplates establishing an ice factory.

Chattanooga—Ice Plant.—M. H. Ward and associates will organize \$30,000 stock company to build ice plant.

Chattanooga—Plow Works.—Chattanooga Plow Co. has permit to erect one-story building, 132 by 164 feet, to cost \$10,000, in connection with enlargements to its plant that will cost \$100,000. An electric power plant of 600 horse-power is contemplated by the company.

Chattanooga—Railroad Shops.—Plans have been completed for the Queen & Crescent route's proposed improvements, previously reported as to be made at the Chattanooga shops. Construction work will begin March 1st, and \$100,000 will be expended.

Chattanooga—Stove Foundry.—Capitalists contemplate building stove-manufacturing plant, to cost from \$50,000 to \$75,000, and J. M. Rannick is interested.

Clarksville—Cannery.—J. Lester Williams, Nashville, Tenn., is organizing company to establish cannery; capital stock to be \$8000.

Columbia—Water-power Electric Plant.—It is rumored that Louisville & Nashville Railroad will develop water power and build electric plant to cost \$15,000, R. Montford, Louisville, Ky., chief engineer.

Columbia—Cotton Gin.—Columbia Cotton Mill Co. will build cotton gin.

Ducktown—Copper Smelters.—Tennessee Copper Co. will install equipment for putting ore direct into smelters instead of roasting by wood fires, in order to avoid the sulphur fumes.

Harriman—Tannery.—The Harriman Leather Co. will largely increase the capacity of its plant.

Humboldt—Brick Plant, Cannery and Flour Mill.—Company to have capital of \$50,000 is being organized to establish cannery; one of \$30,000 capital to build flour mill; and one of \$12,000 capital to build brick and tile works. J. A. Hollingsworth can probably give information.

Johnson City—Working Plant.—J. H. Moseley and brother will establish plant for manufacturing egg crates and dimension stuff.

Knoxville—Electric Power Plant.—Ford, Bacon & Davis, of New York, who have purchased the Knoxville Traction Co. and the Knoxville Light Co. and their plants, will make extensive improvements to both the lighting and power plants.

Knoxville—Car Works, etc.—Scott Car Manufacturing Co. has purchased for \$20,000 a tract of land 300 by 1200 feet in size to provide space for enlargements to its car works and the addition of department for making steam shovels and other appliances used in railroad work.

Memphis—Electro-plating Plant.—Incorporated; Williams & Seyforth Co., capitalized at \$5000, to operate electro-plate plant, by Sidney G. Williams, L. A. Seyforth, Fisher Harwell, A. M. Johnston and George B. Cleveland, Jr. Williams & Seyforth were reported lately as forming company to take over and enlarge their plant.

Memphis—Lumber Mills.—Lee Lumber Co. will increase capital from \$15,000 to \$50,000.

Nashville—Candy Factory.—P. Ch. Panagiotopoulos, M. D. Seipt, John T. Landis and others have incorporated Ocean Candy Co., with capital stock of \$20,000, to establish candy factory.

Nashville—Hardwood Company.—Hugh C. Card, A. Hendley Card, Clay V. Bryant and others have incorporated Southern Hardwood Co. with capital of \$15,000.

Oblion County—Novelty Manufacturing.—C. D. White Novelty Manufacturing Co. has been incorporated with capital of \$1000.

Nashville—Marble Quarries.—Tennessee Marble Co., recently incorporated with \$12,000 capital, has completed organization with W. J. Roberts, president; W. C. Heyser, secretary, and H. M. Farnsworth, treasurer. The Colloway & McNutt quarries, near Concord, which were recently acquired, will be operated.

Nashville—Novelty Works.—G. H. Michaels Manufacturing Co., of La Porte, Ind., has completed arrangements to remove its plant to Nashville, as had been contemplated. An expenditure of \$30,000 will be made at once for initial plant. Product will be lawn swings, settees, household articles, etc.

Nashville—Mercantile.—Chartered: Owl Store Co., capitalized at \$10,000, by Claude McDonald, R. W. McReynolds and others.

Piney Flats—Woodworking Plant.—Piney Flats Manufacturing & Carving Co. has been organized, with capital of \$10,000, to

manufacture furniture, pack fruits, etc., by F. V. Cartright, B. L. Ford, C. M. Warren, J. L. Jones and John F. Gross.

Rock Island—Machine Shop.—George Savage will establish blacksmith shop and possibly a wood-working plant.

Union City—Novelty Factory.—Incorporated: Union City Novelty Co., capitalized at \$10,000, for manufacturing novelties, by C. D. White, R. H. Roney, Henry Moffatt, T. P. Noah and D. W. Beckham.

TEXAS.

Austin—Telephone System.—Southwestern Telegraph & Telephone Co. will expend about \$20,000 to extend cables, improve wire service and for other betterments. J. E. Farnsworth is general manager; offices at Dallas, Texas.

Barstow—Mercantile.—Chartered: Dyer-Briggs Co., capitalized at \$20,000, by G. W. Dyer, George E. Briggs and others.

Dallas—Mercantile.—J. F. Zang Co., capitalized at \$50,000, has been incorporated by J. F. Zang, E. W. Luna, W. L. Nolan and others.

Corsicana—Oil Wells.—East Texas Oil Co., capitalized at \$25,000, has been incorporated to drill for oil, by T. F. Driskill, L. E. Kelton, Rufus Hardy and A. C. Sloan.

Dallas—Mercantile.—Incorporated: J. F. Zang Co., capitalized at \$50,000, by J. F. Zang, E. W. Luna and others.

Dodd City—Cotton Gin.—Dodd Gin & Cotton Co. has been incorporated with a capital of \$15,000.

El Paso—Jackson-Foxworth-Garberath Co.—capitalized at \$25,000, has been incorporated by John Franklin, Leigh Clark and W. P. Bell.

Ennis—Furniture.—R. W. Smith, W. E. Chapman, W. P. McCall and others have incorporated R. W. Smith Furniture Co., capitalized at \$10,000.

Flatonia—Kaolin Mines.—W. Williford contemplates developing kaolin mines.

Fort Worth—Packeries Purification Plant.—Swift & Co. and Armour & Co. have begun the establishment of a plant to purify the waste from their packeries. About \$25,000 will be the cost.

Goliad—Mercantile.—Incorporated: J. H. Ewell Co., capitalized at \$15,000, by J. H. Ewell, J. D. Bell and others.

Henrietta—Oil Wells.—J. W. Lockridge, W. B. Worsham and others have incorporated Lockhart Oil Co., to drill for oil; capital \$50,000.

Henrietta—Oil Pipe Line.—Col. Morgan Jones contemplates building a pipe line from Henrietta to Oil City.

Houston—Bridge.—County Commissioners have awarded contract to E. P. Albury & Son, at \$15,000, for construction of bridge; to be a swing structure with total length of 450 feet, swinging span 250 feet long, roadway 20 feet wide, sidewalks on each side six feet wide, all to be built on cylinder pier of concrete, erected on piling foundation.

Houston—Factory Building.—Harvey T. D. Wilson contemplates erecting modern factory building to cover two city blocks.

Longview—Pottery.—J. P. Donaldson, of Wimberly, Tex., has definitely decided to establish the pottery reported recently as contemplated. Plant will manufacture stoneware, annual output to be 250,000 gallons. Building will be 40x80 feet. W. J. Turner is engineer in charge.

Lufkin—Ice Factory.—Lufkin Ice Co. has been incorporated by C. W. Dawley, of St. Louis, Mo., John A. Phillips and Claud Wiley, of Tyler, Texas, and G. A. Kelley and G. S. Prestridge, of Lufkin, with \$40,000 capital.

Marshall—Sewer System.—The city has accepted plans and specifications for the sanitary sewers reported last week and will open proposals for construction next month. John W. Maxey, Houston, Texas, is the consulting engineer. M. S. Rice, city secretary, will open the bids.

Mineola—Fruit Farms.—Chartered: Mineola Fruit & Vegetable Farm, capitalized at \$50,000, with H. M. Cate, president; J. O. Teagarden, vice-president, and C. A. Cummins, manager. Company will cultivate fruit on 300 acres of land.

Montell—Stock Ranch.—Chartered: Fern Lake Ranch Co., capitalized at \$50,000, by Travis F. Jones, W. W. Collier and L. L. Martin.

Navasota—Cotton Yarn Mill.—H. Schumacher Knitting Mills contemplates in-

stalling machinery to manufacture its yarns.

Paris—Water System.—City has awarded contract to T. W. Oleott, of Dallas, Tex., for construction of 12-inch pipe line to lake.

Port Lavaca—Electric Light and Ice Plants.—Arrangements will be made to secure the establishment of electric light and ice plants, C. J. Spittal and L. Seabrook being interested in the enterprises.

San Antonio—Automobiles.—Chartered: Rambler Automobile Co., capitalized at \$5000, to deal in automobiles, by A. Staacke and A. C. Shell, of San Antonio, and F. Kirchoffer, of San Francisco, Cal.

San Antonio—Hats and Shoes.—Incorporated: American Shoe & Hat Co., capitalized at \$100,000, by Jesse D. Oppenheimer, Emanuel Cohen and others.

San Antonio—Publishing.—Chartered: Texas Banner Publishing Co., capitalized at \$10,000, by A. Kochs, Albin Seidel, Gus Giesecke and others.

Taylor—Lumber.—Joe M. Holder, T. W. Falkenberg and C. W. Meyer have incorporated the Holder Lumber Co., with \$15,000 capital.

Van Horn—Lead Mines.—J. G. Guiley has organized company, with capital of \$50,000, to develop lead mines.

Youkum—Cannery.—Dr. W. Shropshire and F. A. Schubel are forming company to build cannery factory.

VIRGINIA.

Arvonia—Slate Quarries.—Evan R. Williams and associates will open slate quarries.

Berkley—Mirror Factory.—Reports state that F. Ecker, 176 Grand street, New York, will establish a mirror factory.

Covington—Flour Mill.—Allegheny Milling Co., recently reported incorporated to build 100-barrel flour mill, has elected E. N. Nettleton, president; J. T. Fudge, vice-president, and C. W. Rush, general manager. Electric power will be used.

Lexington—Air-brake Works.—Birmingham Automatic Emergency Air-brake Co., capitalized at \$50,000, has been organized to manufacture and introduce new air brake for cars. W. G. Matthews, of Glasgow, Va., president; Robert Catlett, of Lexington, secretary, and directors, Messrs. D. P. Halsey, W. H. Partlow, E. J. McCulloch and J. P. Birmingham.

Lynchburg—Water Works.—City is arranging to call for bids next month on the construction of its proposed filtration system, previously announced. The cost will be probably about \$700,000. H. O. Shaner, city engineer, is preparing plans and specifications.

Martinsville—Tobacco Factory.—Sparrow & Gravely will incorporate and enlarge their tobacco manufacturing plant.

Norfolk—Cold-storage Warehouse.—Anheuser-Busch Brewing Association of St. Louis has received bids for the erection of its proposed cold-storage warehouse, to cost about \$16,000, and will award contract during the week. Wildman, Walsh & Boisselier, of St. Louis, prepared the plans. It is stated the company also contemplates building an ice factory.

Norfolk—Cotton-machinery Works.—Elias Goldsmith, of the Lambert's Point Silk Mills, has invented a loom picker, and will organize to establish works for its production.

WEST VIRGINIA.

Clarksburg—Brewery.—Jacob Koblegrad states there is no truth in the recent report that he will build a brewery.

Clarksburg—Candy Factory.—Bloomer Candy Co., of Zanesville, O., will establish candy factory.

Clarksburg—Construction Works.—L. K. Richards, G. M. Ellis, T. W. Ward and others have incorporated Richards Construction Co., with capital of \$25,000.

Dulany—Mercantile.—Chartered: Steel Run Store Co., capitalized at \$10,000, by S. P. Wilson, of Pennsboro, W. Va.; E. E. Elder, of Aloy, W. Va., and others.

Elkins—Electric Lighting, Steam Heat, etc.—Contract has been awarded to J. H. Dailey, at \$4191, for installing the heating and lighting plant in court house.

Grafton—Brewery.—Grafton Brewing Co., reported incorporated recently with \$100,000 capital, will build brewery with annual capacity of 30,000 barrels of beer; also an ice plant of 25-ton capacity and an electric light & power plant. John V. Knoth and H. P. Ecker, of Pittsburgh, Pa., are the engineers in charge.

Hurricane—Gas and Oil Wells.—B. S. Corby, of Hurricane, Edward Schenck and

others of Huntington, W. Va., have incorporated Corby Oil & Gas Co., with \$10,000 capital.

Kenova—Wood-working Plant.—Portsmouth Rim & Spoke Co., of Portsmouth, O., has secured control of Muncie Wheel & Jobbing Co.'s rim and spoke mill and will make extensive improvements, to include the addition of new machinery.

Lazerville—Foundry and Machine Shop.—Henry Stenzle will build foundry and machine shop.

Logan—Coal Mines.—Prudential Coal & Mining Co., which was recently organized by J. L. Houseman, C. B. Robinson and others, of Cleveland, Ohio, has acquired several hundred acres of coal lands, which will be developed. Company will erect at once saw mill to manufacture lumber for the necessary buildings.

Morgantown—Glass Works.—It is stated that West Virginia Plate Glass Co. has selected site for its proposed works, and will soon begin construction. Company is capitalized at \$1,000,000.

Mount Hope—Construction Work.—Snyder Construction Co. has been incorporated, with capital of \$10,000, by P. M. Snyder, T. H. Snyder and others.

Wheeling—Construction Works.—Phoenix Construction Co., capital \$10,000, has been incorporated by J. B. Hoffman and M. Hoffman, of Benwood, W. Va., H. J. Kerner and L. M. Kerner, of Wheeling.

Wheeling—Machine Supplies.—B. W. Peterson, G. W. Lutz and others have incorporated Midland Supply Co., with capital of \$25,000.

Wheeling—Coal and Coke.—George Whyel, Harry Whyel, J. B. Burchard and others, all of Uniontown, Pa., have incorporated the Lafayette Coal & Coke Co., with authorized capital of \$300,000.

Wheeling—Coal and Coke.—George Whyel, Harry Whyel, Isaac Brownfield and others, all of Uniontown, Pa., have incorporated Rosby Rock Coal and Coke Co., with an authorized capital of \$250,000.

INDIAN TERRITORY.

Chickasha—Water Works.—City has awarded contract for the construction of water works to W. W. Cook & Son, Junction City, Kans., at \$69,730.

Durant—Canning Plant.—Fruit & Vegetable Growers' Association is promoting a movement to establish canning plant.

Durant—Water Works.—The city has accepted plans and specifications for its water works, for construction of which \$89,000 is available in accordance with the recent bond issuance voted. Burns & McDonnell, engineers, Postal Telegraph Building, Kansas City, Mo.

Muskogee—Oil Wells.—Incorporated: Great Chief Oil Co., capitalized at \$401,000, by C. M. Bradley (president), J. C. Fast (secretary-treasurer), I. N. Ury, C. K. Marks and others; purpose, to drill for oil.

South McAlester—Bakery.—R. Biles, of Pittsburg, Kans., will build bakery and later add a confectionery manufacturing department.

Tulsa—Brick Plant.—Tulsa Sand & Brick Co. has been incorporated with capital of \$40,000; J. M. Hall, president; Jay Forsythe, vice-president; J. F. Weymouth, secretary, and A. S. Houk, business manager. Plant for manufacturing sand-lime brick, capacity 20,000 daily, will be built.

OKLAHOMA TERRITORY.

Agra—Cotton Gin.—T. V. Comer and Henry McKeown, of Agra, L. H. Rooney and H. M. Johnson, of Chandler, have incorporated Agra Gin & Cotton Co., with capital of \$5000.

Anadarko—Cement and Plaster.—Homer W. Dunbar, J. D. Thompson, T. B. Page and others have incorporated Anadarko Plaster & Cement Co., with capital of \$100,000.

Arapaho—Cotton Gin and Flour Mill.—Arapaho Cotton Co. has organized, with capital of \$15,000, to build 300-barrel flour mill and cotton gin.

Chandler—Telephone Co.—Chartered: Farmers' Mutual Telephone Co., capitalized at \$7500, by L. L. Brown, G. W. Davis, H. P. Pomeroy, and others.

El Reno—Gas Plant.—Charles Harvey, representing Battle Creek, Mich., capitalists, has received franchise for construction of plant to supply gas for light, heat and fuel. J. S. Perry, of El Reno, will be superintendent of construction of plant.

Granite—Mining and Milling.—Chartered: Free Milling & Mining Co., capitalized at \$1,000,000, by C. W. Austin, Thomas H.

Brown and others, of Granite, and A. J. Meers, of Wildman, O. T.

Guthrie—**Gas and Oil Wells.**—Chartered: Oklahoma Oil & Gas Co., capitalized at \$25,000, by Joseph H. Norris, E. G. Milliken, Frank Hindman and others.

Hobart—**Implement Works.**—Oklahoma Mfg. Co. will increase capital from \$6000 to \$25,000.

Lawton—**Flour Mill.**—Arthur & Adams, of Luther, O. T., will build flour mill.

Oklahoma City—**Mining and Milling.**—Chartered: Wesson Blue Beaver Creek Mining, Milling & Water Co., capitalized at \$5,000,000, by H. E. Lane, of Clarksville, Texas; Oral C. White, of Shawnee, O. T.; Peter Anderson, of Memphis, Tenn., and others.

Oklahoma City—**Brick Works.**—Oklahoma Brick Co. will enlarge its plant.

Oklahoma City—**Gold Mining.**—Chartered: Naco Gold Mining Co., capitalized at \$1,000,000, by G. W. Patrik, G. W. Garrison, J. W. Webb and others.

Oklahoma City—**Sporting Goods.**—M. F. Lewis, S. A. Goodman and R. B. Lewis have incorporated Oklahoma Sporting Goods Co. with capital of \$10,000.

Oklahoma City—**Coffee.**—G. W. Anderson, Oliver C. Black and C. M. Hyskell have incorporated Oklahoma Coffee Co. with a capital of \$100,000.

Ponca City—**Mining, etc.**—J. J. Barnes, Wm. Giles, C. F. Cannon and others have incorporated Farmers' & Merchants' Oil, Gas & Mining Co., with \$30,000 capital.

Roosevelt—**Mining.**—A. M. Beam, Denver, Col., G. W. Wallace, W. H. Hubbell and others have incorporated Alpha Mining Co., with a capital of \$100,000.

Shawnee—**Garment Factory.**—H. B. Beard, John R. Young, John W. Walker and others have incorporated Shawnee Garment Mfg. Co., with capital stock of \$25,000, for manufacturing garments.

Shawnee—**Gas and Oil Wells.**—S. V. V. Crasson, C. G. Baugh and J. J. England have incorporated Shawnee Oil & Gas Co. to drill for gas and oil. Capital stock \$250,000.

Stillwater—**Supplies.**—V. Blush, W. H. Hinkel, D. J. Wood and others have incorporated United Farmers' & Shipping Supply Co., with capital of \$5000.

BURNED.

Berkley, Va.—W. L. Moore's box factory; loss reported at \$5000.

Birmingham, Ala.—White-Blakeslee Manufacturing Co.'s engine works, damaged to extent of \$10,000.

Cary, Miss.—B. Goodman's cotton gin; loss, \$7500.

Chattanooga, Tenn.—Southern Stove, Hollowware & Foundry Co.'s plant, valued at \$5000.

Claremont, Va.—Johnson & Potter's stave factory; loss, \$4000.

Joplin, Mo.—National Manufacturing Co.'s plant; loss, \$10,000.

Lawrenceville, Ga.—C. D. Gunter's furniture factory; loss \$3000.

Memphis, Tenn.—Canno, Yates & Co.'s flour mill and grain elevator; loss estimated at \$60,000.

Newton, Tex.—William Dawson's saw mill; loss, \$1000.

Norman, O. T.—Cleveland county courthouse; loss, \$6,000. Address Cleveland County Commissioners.

Petersburg, Va.—Petersburg Crystal Ice Co.'s plant; loss estimated at \$25,000.

Tyrone, Ky.—John Dowling & Co.'s distillery; loss, \$15,000.

Waverly, Ky.—Culver Milling Co.'s flour mill; loss, \$15,000.

Winchester, Va.—F. C. Clark's roller flour mill; loss \$2500.

BUILDING NOTES.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Asheville, N. C.—**Auditorium.**—Plans prepared by R. S. Smith have been accepted for city's proposed auditorium, recently reported, to cost \$30,000. Duff Merrick, president of executive committee.

Asheville, N. C.—**Auditorium.**—Proposals will be opened March 10th for constructing the auditorium recently reported, for which about \$30,000 will be available. Plans and specifications have been accepted from R. S. Smith, and he can furnish copies on deposit of \$25, which amount will be returned when plans are returned. Bids will be opened by W. F. Randolph, secretary of Asheville Auditorium Co.

Atlanta, Ga.—**Dwelling.**—H. L. Schlesinger will erect frame dwelling to cost \$7000.

Atlanta, Ga.—**Factory Building.**—S. M. Inman has obtained permit to erect factory building to cost \$12,000.

Augusta, Ga.—**Opera House.**—Philadelphia parties are financing an enterprise for the erection of an opera house to cost from \$50,000 to \$60,000. Fred. G. Shaw is preparing the plans.

Baltimore, Md.

Baltimore, Md.—**Warehouse.**—McCormick & Co. expect to begin erecting at once a five-story warehouse, to replace structure destroyed by the fire. Temporary offices at 226 Pleasant street.

Baltimore, Md.—**Business Block.**—E. J. Richardson & Sons have let contract to Morrow Bros., Clay street, for reconstruction of business block damaged by fire; expenditure will amount to \$40,000.

Baltimore, Md.—**Warehouse.**—Baltimore Bargain House, Baltimore and Liberty streets, has awarded contract to Morrow Bros., Clay street, for rebuilding warehouse destroyed by the fire. Structure to be six stories high, of brick, and cost \$125,000.

Baltimore, Md.—**Hotel.**—James L. Kerman, offices at Hotel Renner, will arrange for immediate beginning of work on construction of eight-story hotel, to cost \$150,000.

Baltimore, Md.—**Warehouse.**—J. Evans Sperry, architect, has been engaged to prepare plans for reconstruction of Riddlemoser Co.'s warehouse building.

Baltimore, Md.—**Stock Exchange.**—Stock Exchange Building Co. has engaged Howell & Stokes, of New York, to prepare plans for erection of exchange and office building, five stories, to cost about \$125,000.

Baltimore & Ohio Railroad Co. has awarded contract to Alvin R. Morrison for reconstruction of its piers at foot of South street, 160 by 250 feet, to include several temporary buildings; later a six-story brick structure will be built.

Baltimore & Ohio Railroad Co. is considering plans for the erection of a building for its general offices; may remodel its burned building also and erect new structure on another site, or may both remodel and build; George L. Potter, general manager, offices at Camden Street Station.

Manufacturers' Record Publishing Co. intends erecting, for its exclusive use, an office building, two or three stories, on site from 3000 to 5000 feet square.

Maryland Casualty Co., temporary offices at 207 West Fayette street, has accepted plans and specifications by Parker & Thomas, of Baltimore and Boston, for construction of ten-story office building, 40 by 210 feet, to cost about \$500,000; John T. Stone, chairman of committee in charge.

Merchants' Club will erect modern structure to cost more than \$75,000, which was the value of burned building; N. S. Hill is in charge; office at Belvedere Hotel.

William G. Nolting, architect, estimates that about \$50,000 will be the cost of repairing damage to exterior walls of Baltimore Court House.

United States Fidelity & Guaranty Co., temporary offices at 16 West Saratoga street, will at once rebuild its office structure, expend probably about \$400,000 or more; plans have not been decided upon.

Dowell, Helm & Co., temporary headquarters at 115 Hanover street, will rebuild on its old site as soon as the city will issue building permits; probably over \$200,000 will be expended; structure to be adapted for dry goods business.

Estates represented by the Safe Deposit & Trust Co., temporary offices at 604 North Charles street, will erect structures to replace 95 warehouses which were burned, at a loss of about \$1,000,000.

Carrollton Hotel Co. will rebuild its hotel, which was burned at a loss of about \$300,000; N. S. Hill, headquarters at Belvedere Hotel, managing director.

Chamber of Commerce will rebuild its structure, valued at about \$250,000, and is believed that the walls can be used again; temporary offices in Masonic Temple, Charles street near Saratoga street.

Baltimore Stock Exchange will rebuild its burned structure; temporary offices in the Stafford Hotel.

Continental Trust Co. will rebuild its structure damaged by fire; present walls, 13-story building, may be again used; temporary offices at Hotel Renner; old structure was valued at over \$500,000.

First National Bank, temporary offices at Gay and High streets, will rebuild its structure, loss on which was over \$250,000.

Herald Publishing Co. has awarded contract to James Stewart & Co., of St. Louis and other cities, for reconstruction of its printing offices and general office building, walls of which, together with floors, it is reported, can be used; cost will be probably nearly \$200,000, and Stewart & Co. claim the building can be ready for occupancy in sixty days; however, city has refused for the present to issue any building permits; Stewart & Co. have temporary offices at Stafford Hotel, Baltimore.

Maryland Savings Bank, Daniel Cloud, president, will build modern office and banking building on site of its burned structure, which was not a modern one.

Merchants' National Bank will remodel its building (exclusive use of bank), damaged to extent of \$200,000 and possibly much more; temporary offices at St. Paul House, Cathedral street near Clay street.

International Trust Co., temporary offices at 230 North Charles street, will repair its structure, damaged to extent of probably \$50,000.

Banking and office buildings, cost varying from \$200,000 to \$500,000 and over, will also be erected, when city is prepared to grant permits, by Hopkins Place Savings Bank; National Exchange Bank, offices at 517 West Baltimore street; National Mechanics Bank, Lexington and Courtland streets; National Bank of Commerce, 28 West Lexington street; National Union Bank, 212 North Charles street; Law Building Co.; Townsend Scott & Son, 209 East Fayette street; Baltimore, Chesapeake & Atlantic Railway (wharves) (Willard Thompson, general manager); Baltimore, S. M. Prevost, president, Philadelphia; Equitable Building Co., closely connected with Equitable Life Assurance Society of New York; Calvert Building and Construction Co., an annex to the Equitable Building Corporation.

Baton Rouge, La.—**Church.**—Christian Church has accepted plans by G. F. Legg for proposed edifice and let contract to J. D. Matthews, Dallas, Tex., who has begun construction.

Baton Rouge, La.—**School Building.**—Committee on School Building has accepted plans and specifications by Andrew J. Bryan & Co., of New Orleans, La., for construction of school building, pressed brick and slate, eight school-rooms, two administration rooms, 300 feet square, etc., to cost \$18,500.

Bells, Tenn.—**City Hall.**—Bells Improvement Co. has let contract for erection of city hall.

Bells, Tenn.—**Bank Building.**—Bank of Crockett has let contract for erection of office building.

Belton, Tex.—**Library Building.**—B. D. Lee has received contract to erect Carnegie library building.

Bessemer City, N. C.—**Warehouse.**—J. A. Smith, J. A. Pinchback and others have incorporated Public Storage Warehouse Co., with capital of \$25,000.

Brenham, Tex.—**Warehouse.**—Brenham Cotton Mills has let contract to W. A. Griffin for the erection of a brick cotton warehouse.

Bristol, Tenn.—**School Building.**—The Board of Aldermen voted \$10,000 for the erection of a school building. Bonds will be issued. Address the mayor.

Bristol, Tenn.—**Church.**—Lutheran Church, Rev. Paul Sieg, pastor, will build edifice.

Bristol, Tenn.—**Bank Building.**—National Bank of Bristol will erect office building 175 feet long, of gray brick and granite, to cost \$90,000.

Colfax, La.—**Bank Building.**—R. H. Beard, of Jellico, Tenn., and associates propose building banking structure two stories high, 25x40 feet.

Lake Charles, La.—**School.**—Koerner Construction Co. has received contract at about \$10,000 for construction of school.

Lexington, Ky.—**Hospital.**—St. Joseph's Hospital is reported as to build addition four stories high.

Lexington, Ky.—**Office Building.**—A lodge building to cost \$16,000 will be erected after plans by H. L. Rowe.

Lenoir, N. C.—**Court House.**—Otter & Poe have contracted to build court house.

Little Rock, Ark.—**Warehouse.**—J. E. Skillern has let contract for erection of five-story hardware house to cost about \$75,000. Building to be occupied by Dickinson Hardware Co.

Macon, Mo.—**School.**—Board of Education will open bids February 23d for erection of two-story brick school building, after plans and specifications on file with the board at Macon and with the architect, J. H. Felt, at St. Joseph, Mo.

Meridian, Miss.—**Warehouse.**—Myer-Neville Hardware Co. have let contract to C. H. Dabbs & Co. for erection of \$20,000 warehouse.

Moundsville, W. Va.—**Jail.**—The County Court has decided to build jail to cost from \$15,000 to \$20,000.

Monterey, Va.—**Hotel.**—S. W. Crummett has let contract to Eutlers Bros., of Grot-

Church, South, will erect edifice to cost about \$10,000 after plans now being prepared by Rev. J. C. Jeter.

Dallas, Tex.—**Church.**—Washington Avenue Baptist Church has decided to arrange for erecting an edifice to cost \$80,000.

Durham, N. C.—**Business Block.**—N. Underwood, contractor, will build brick business block.

Durham, N. C.—**Residence.**—Hill C. Linthicum is preparing plans and specifications for residence for Blanche Briggs.

Elkins, W. Va.—**Hotel.**—Mingo Hotel Co. will be organized with capital of \$50,000 to build hotel by Thos. L. Davis and others.

Evergreen, Ala.—**Store Building.**—Wild Bros. will erect two-story brick store building, 50x100 feet.

Fernandina, Fla.—**Theatre.**—Lyceum Association contemplates remodeling and enlarging theatre building.

Fort Valley, Ga.—**Theatre.**—Company is being organized to build opera house. Possibly W. F. Miller can give information.

Fort Valley, Store.—W. F. Miller will remodel old building into a modern store.

Girard, Ala.—**Bank Building.**—Phoenix-Girard Bank will erect office building. Address care U. H. Smith, Columbus, Ga.

Grandview, Tex.—**Bank Building.**—First National Bank will erect a modern bank building.

Goldsboro, N. C.—**Church.**—St. Paul Methodist Church will build edifice to cost about \$10,000, contract for which has been let to H. C. Linthicum, of Durham, N. C.

Greenville, S. C.—**School.**—Grandy & Jordan have received contract at about \$10,000 for erection of city school building, after plans and specifications by Charles E. Choate, of Augusta, Ga.

Greenville, S. C.—**School.**—Grandy & Jordan have contract, at \$10,400, for erection of school building, after plans and specifications by Charles E. Choate, of Augusta, Ga.

High Point, N. C.—**Warehouse.**—Tomlinson Chair Manufacturing Co. will erect storage-house, 60 by 150 feet, four stories high.

Hopkinsville, Ky.—**Jail.**—Committee has been appointed to examine plans for a proposed jail to cost probably \$10,000. Address County Judge.

Houston, Tex.—**Business Block.**—C. J. Kochler is reported as to erect brick business structure to replace building recently burned.

Kaplan, La.—**Church.**—Roman Catholic Church has accepted plans and specifications by H. J. Andrus, of Crowley, La., for construction of church 46x80 feet.

Knoxville, Tenn.—**Business Buildings.**—Bauman Bros., architects, will prepare plans and specifications for rebuilding and remodeling several business buildings recently burned. About \$100,000 to be expended.

LaFollette, Tenn.—**Bank Building.**—R. H. Beard, of Jellico, Tenn., and associates propose building banking structure two stories high, 25x40 feet.

Lake Charles, La.—**School.**—Koerner Construction Co. has received contract at about \$10,000 for construction of school.

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Monterey, Va.—**Hotel.**—S. W. Crummett has let contract to Eutlers Bros., of Grot-

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toes, Va., for erection of hotel lately reported. Structure will be three stories high, 60 by 72 feet.

Montgomery, Ala.—Hotel.—David P. West will enlarge and remodel Windsor Hotel, adding 50 rooms.

Montgomery, Ala.—Hotel.—Emil Lesser, Birmingham, Ala., and stockholders of the Exchange Hotel contemplate the erection of an eight-story hotel.

Moultrie, Ga.—School.—City is now considering two sets of plans by G. W. Milligan, architect, for its proposed school building. Plans refer to a \$17,000 and a \$22,000 structure. Address the mayor.

Nashville, Tenn.—Apartment House.—A. W. Wills contemplates building six-story apartment house, to cost \$200,000.

Nashville, Tenn.—Association Building.—Young Women's Christian Association expects to make arrangements in the near future for construction of its home building in contemplation for some time. About \$26,000 will be expended and plans will soon be considered. Mrs. O. E. Brown is president; offices at 150 Summer street.

Nashville, Tenn.—Church.—Russel Street Presbyterian Church will build edifice to cost \$30,000. Rev. G. W. Shelton, pastor.

New Orleans, La.—Theatre.—Charles A. Steard has received contract at \$81,000 for construction of proposed Greenwall Theatre, contract not including plumbing, steel structure, electrical work and some other work. Building complete will cost \$140,000.

Norfolk, Va.—Bank Building.—Neff & Thompson have completed plans and specifications for Virginia-Carolina Trust Co.'s proposed building. A steel vault, to cost \$20,000, will be constructed in connection.

Ocilla, Ga.—School Building.—City will erect two school buildings, plans and specifications for which are being asked. Address the mayor.

Pensacola, Fla.—Warehouse.—Bass & Co. will erect three-story building, 50 by 150 feet, for dry goods house.

Pensacola, Fla.—Association Building.—Young Men's Christian Association Building, reported last week, is to cost about \$20,000. The architect will be selected by competition with prizes in addition to commission to successful competitor. J. H. Sherrill is secretary.

Perryville, Mo.—Jail.—Perry county will build jail and jailer's residence after plans and specifications by J. W. Gaddis, of Vincennes, Ind., to cost \$5000. Chalmer F. Luckett is county clerk.

Pineville, N. C.—Church.—Flint Hill Baptist Church will erect edifice to cost about \$10,000, of brick and granite, Gothic style of architecture, after plans by McMichael & Hunter, of Charlotte, N. C.

Port Lavaca, Tex.—Hotel.—Arrangements will be made for the erection of hotel. Possibly L. Seabrook can give information.

Portsmouth, Va.—Masonic Temple.—Ancient Free and Accepted Masons has accepted plans for proposed temple, 44x100 feet, to cost \$22,000.

Rabun, Ga.—College Buildings.—College buildings to cost about \$10,000 will be erected. Prof. A. J. Ritchie can give information.

Raleigh, N. C.—Theatre.—Academy of Music Co. has received plans and specifications from C. K. Bryant, of Charlotte, N. C., for enlarging and remodeling theatre.

Raleigh, N. C.—Lodge Building.—Raleigh Lodge of Elks will erect three-story building for offices, lodge rooms, bathing pool, etc.

Richmond, Va.—Church.—Second Baptist Church has let contract to John T. Wilson for construction of edifice to cost \$54,000, after plans by Noland & Baskerville.

Richmond, Va.—Dwelling.—S. G. Crenshaw will erect residence to cost \$12,000, after plans and specifications by Noland & Baskerville, Chamber of Commerce Building.

Rowland, N. C.—Church.—Presbyterian Church will build edifice after plans and specifications being prepared by Hill C. Linthicum, of Durham, N. C.

Rutledge, Tenn.—Court House.—Proposals will be opened March 17th for construction of court house after plans and specifications on file at office of County Judge at Rutledge, and at office of Wheeler & Runge, architects, Charlotte, N. C. Successful bidder will be required to file bond for \$10,000 to insure successful completion of contract. For further information address J. S. Gill or A. F. Bryan, county judge.

San Antonio, Texas—Hospital.—Hospital will be opened March 9 for construction of eight-bed hospital, including installation of plumbing, gas piping and hot water heating equipment at Camp Eagle Pass.

Plans can be seen at office of Quartermaster, Camp Eagle Pass, and of Chief Quartermaster, San Antonio, Texas.

Savannah, Ga.—Church.—Savannah Contracting Co. has received contract at about \$31,000 for erection of proposed edifice for Sacred Heart R. C. Church.

Savannah, Ga.—Hotel.—J. Ferris Cann contemplates building apartment hotel, to cost \$150,000.

Savannah, Ga.—City Hall.—City has let contract to S. S. Leonard, at \$200,795, for the erection of its proposed city hall.

Savannah, Ga.—Masonic Temple.—Masonic Temple Association has decided to arrange for erection of temple, four stories high, marble and pressed brick, to cost from \$60,000 to \$75,000. Plans and specifications will be called for soon.

Statesville, N. C.—Theatre.—E. G. Gilmer is organizing company to remodel building into theatre.

Sparta, N. C.—Church.—Presbyterian Church will build edifice after plans and specifications being prepared by Hill C. Linthicum, of Durham, N. C.

St. Louis, Mo.—Hotel.—Excelsior Brewing Co. will build hotel, 47 by 195 feet, two stories high, all modern improvements and construction, after plans and specifications by Widmann, Walsh & Boiselle, Wainright Building. Bids were to be opened February 10.

St. Louis, Mo.—Hotel.—Christian Endeavor Society will build hotel, three stories, 308 by 332 feet, four elevators, and other modern improvements, to cost \$95,000. Plans and specifications by F. C. Bonsack, 318 North Eighth street.

Tallahassee, Fla.—Business Block.—Gillmore-Davis Co. will erect brick business block three stories high.

Tallahassee, Fla.—Bank Building.—Capital City Bank has let contract to Child Bros. for erection of marble front banking building, 25x100 feet.

Tupelo, Miss.—Court House.—County Court has accepted plans and specifications for its proposed court house, which is to be built at a cost of \$50,000.

Vicksburg, Miss.—Church.—Presbyterian Church of Vicksburg has purchased at \$10,000 site for erection of church building.

Vicksburg, Miss.—Hotel.—Reports state the First National Bank is interested in proposed erection of hotel.

Waco, Tex.—Masonic Temple.—Definite plans have been decided for the proposed Masonic Temple, and bids are ordered opened at Fort Worth on March 7th for a three-story brick structure to cost \$150,000. J. E. Flanders, of Dallas, Tex., is the architect.

Wadesboro, N. C.—Hotel.—Rocky River Springs Co. will build 20-room addition to frame hotel.

Walter, O. T.—Business Buildings.—A. M. Thompson, of Oklahoma City, O. T., has contract to erect six business buildings.

Waxahachie, Texas—Warehouses.—Waxahachie Cotton Mills will build standard warehouses for 1800 bales of cotton.

Winston-Salem, N. C.—Office Building.—E. W. O'Hanlon will erect an eight-story office building to cost \$100,000.

Winston-Salem, N. C.—Storage.—Huntley Hill Stock Company will erect large storage warehouse.

Winston-Salem, N. C.—Tobacco Warehouse.—M. W. Norfleet & Co. will erect large tobacco warehouse.

RAILROAD CONSTRUCTION.

Railways.

Adrian, Ga.—The Wadley & Mt. Vernon Railroad.—It is reported, shortly complete the extension to Barrow's Bluff. The track has been laid, but it remains to be surfaced. Surveys have been made between Douglas and Willacoochee, about 17 miles. T. J. James is president and purchasing agent.

Baltimore, Md.—Reported.—That the Baltimore & Ohio Railroad will build a line from Pine Grove on the West Virginia Short Line to connect with the Wheeling Division in order to secure easier grades for through coal traffic.

Baltimore, Md.—Reported.—That the Baltimore & Ohio Railroad will double track its line between Wheeling, W. Va., and Washington, Pa. D. D. Caruthers is chief engineer.

Beaumont, Tex.—The Beaumont, Sour Lake & Port Arthur Traction Co.—has, it is reported, made an official statement that

10 miles and a half of track has been finished from Beaumont to Pins Island, Bayou, also work will begin this month on the line to Port Arthur and to Sour Lake, a total of about 40 miles, and there will also be built extensions to Saratoga and Batson Prairie, 24 miles.

Bessemer, Ala.—A committee is at work on a plan to build an electric railroad connecting Bessemer with towns in the Blue Creek, Brookwood and Blocton districts. Among those interested are S. E. Jones, W. J. Parkes, R. F. Smith, J. J. Sullivan, W. L. Rush, W. W. Hollingsworth, T. Y. Huffman, W. P. Gunn and C. L. Odell. Engineers will begin work in a few days.

Birmingham, Ala.—Reported.—That the Birmingham Railway, Light & Power Co. will build a suburban railway to Jonesboro.

Bunkie, La.—Mr. S. E. Schmidlin, secretary of the Bunkie Progressive Union, writes the Manufacturers' Record that the proposed railroad will be 35 or 40 miles long, from a point on the Shreveport & Red River Valley Railroad south through Bunkie, touching at Rola and extending into the northern end of St. Landry Parish. It will connect with the Texas & Pacific at Bunkie and the Southern Pacific at Eola. W. D. Haas is promoting the road, and he may be addressed concerning supplies and construction.

Charleston, W. Va.—The preliminary survey for the proposed Imboden & Odell Railroad is reported complete and location in progress.

Cleveland, Ohio.—W. H. Pelton is reported to have a charter to build a railroad from Moreland, Ky., southwest via Liberty, Dunnville and Russell Springs, to Bon Air, Tenn., about 110 miles. This would connect the Cincinnati Southern and the Nashville, Chattanooga & St. Louis railroads.

Dallas, Texas.—The Dallas Commercial Club is reported to be interested in a plan to build an electric railway from Dallas to Waxahachie, 60 miles.

Denison, Texas.—The Texas & Pacific Railway is building a short piece of line here to connect with the St. Louis & San Francisco and the Houston & Texas Central.

Dublin, Ga.—Reported.—That the Rentz Lumber Co. will build a railroad from Dublin to its plant, about 10 miles, and that it will be extended to Eastman, Ga. Those interested are E. P. Rentz, of Dublin, and W. D. Harper and John J. Simson, of Atlanta; J. P. Pugsley is chief engineer, and will locate the line.

Dublin, Ga.—The Dublin & Southwestern Railroad has applied for a charter to build a line from Dublin via Eastman to Abbeville, Ga., about 45 miles. The incorporators are E. P. Rentz, William Pritchett, J. M. Stubbs, D. S. Blackshear and F. S. Battle, of Dublin, W. D. Harper and John J. Simson, of Atlanta, and J. P. Pugsley, Homer D. Strickland and George Rentz, of Emanuel county. Mr. E. P. Rentz is of the Rentz Lumber Co., the plant of which is Dublin, Ga., the Dublin & Southwestern Railroad is to be built from Dublin on the line of the proposed road. Mr. Pugsley is engineer and has begun locating the line.

Ft. Smith, Ark.—Mr. H. A. Schwanecke, chief engineer Ft. Smith & Western Railroad, writes the Manufacturers' Record that there is nothing in the press report that the company is contemplating an extension to St. Louis.

Galveston, Texas.—The Gulf & Interstate Railroad will, it is reported, build an extension from Winnie to Lufkin, about 115 miles, going through Sour Lake and Saratoga. J. W. Campbell is receiver.

Goldsboro, N. C.—President N. O. Berry, of the Enterprise Lumber Co., writes the Manufacturers' Record that the branch railroad it is building from the Atlantic Coast Line is simply for its own logging purposes.

Houston, Texas.—Reported.—That the New York, Texas & Mexican Railway (Southern Pacific System) will extend its Texas Palace Branch via Port Lavaca to Refugio, 110 miles. E. B. Cushing is engineer in charge.

Houston, Texas.—The Galveston, Houston & Northern Railroad is improving its track between Houston and Galveston.

Huntsville, Tex.—Mr. Jno. L. Wortham, financial agent of the Texas State Penitentiaries, writes the Manufacturers' Record confirming the report that it is proposed to extend the State road, which now runs west from Rusk, Cherokee county, about 10 miles, but further says that the board is unable at this time to state when the construction will begin.

Houston, Texas.—The Beaumont, Sour Lake & Port Arthur Traction Co.—has, it is reported, made an official statement that

road plan in which P. W. Bean, of Kansas City, is interested. The line is to connect Palestine, Athens, Canton and Grand Saline, 100 miles.

Lexington, Ky.—Mr. E. J. Hunter writes the Manufacturers' Record that he is pushing a plan to build two links of railroad, one from Brooksville, in Bracken county, to Johnson, in Fleming county, 30 miles, and another from Hillsboro to Salt Lick, in Bath county, 10 miles, to connect link up the Brooksville Railroad and the Covington, Flemingsburg & Ashland roads, which would make a through route 75 miles long from Weirsburg, on the Chesapeake & Ohio Railway, to Salt Lick, also on the Chesapeake & Ohio Railway and on the Kentucky Midland. It would connect with the Salt Lick with the Licking Valley road, which might be extended about 15 miles to West Liberty.

Lithonia, Ga.—John D. Kelley is reported interested in a plan to build a railroad from Lithonia to Tucker, eight miles, connecting with the Seaboard Air Line.

Lithonia, Ga.—The Georgia Granite Railroad Co. will, it is reported, build a line three and one-half miles long from Lithonia to Rock Chapel Mountain. The incorporators are W. H. Paterson, W. H. Paterson, Jr., D. C. Paterson, E. B. Paterson, Frank H. Reynolds, W. S. Brown, F. M. Farley, J. W. English and E. S. Candless.

Live Oak, Fla.—The Suwanee & San Pedro Railroad is surveying for an extension from Perry, Fla., to Wacissa, Fla., 30 miles. Frank Drew is president and general manager, and R. N. Ellis, Jr., chief engineer.

Louisville, Ky.—Reported.—That the Louisville & Nashville will make a survey for a line from Jasper, Ga., on its Atlanta, Knoxville & Northern Line via Jefferson to Athens, Ga., about 70 miles. It is also reported that the Louisville & Nashville will build a branch from Anniston, Ala., via Oxford to Jenifer, Ala., about 10 miles. R. Montfort is chief engineer.

Lufkin, Tex.—Mr. P. A. McCarthy, civil engineer, writes the Manufacturers' Record that he has made a reconnaissance for the proposed Colorado, Oklahoma & Southeastern Railway, which is to run from either Woodward or Gage, O. T., on the Santa Fe, southeast to a point on the Choctaw, Oklahoma & Gulf Railroad (Rock Island System), at or near Weatherford or Hyde, 100 miles. The officers are: President, C. M. Cade, Shawnee, Okla.; vice-president, J. H. Dillon, Geary, Okla.; secretary, H. E. Bonchake, Weatherford, Okla.; treasurer, C. E. Davis, Weatherford, Okla.; general attorney, W. D. Cardwell, Weatherford, Okla. The directors are the gentlemen above named and C. H. Dewade, of Oklawaha City, Okla.; J. W. Morrison, of Independence, Okla.; J. N. Cook, of Elk City, Okla., and A. T. Kruse, of Geary, Okla. The company is preparing to begin construction within 60 days and to complete the line to handle this year's crop.

Luxora, Ark.—The Luxora, Evening Shade & Northwestern Railroad has been granted its charter to build its proposed line 100 miles long.

Memphis, Tenn.—The location engineers for the proposed Memphis & Gulf Railroad are reported as saying that none of the grades will exceed 40 feet to the mile on the entire line. Mr. Seely Dun is general manager.

Meridian, Miss.—J. M. T. Hamilton is reported to have completed the survey for a branch line of the proposed Meridian, Jackson & Kansas City Railroad into Decatur, Miss.

Nashville, Tenn.—A report from Mill Creek, I. T., says it is rumored that the Tennessee Central may be extended west to Oklahoma. W. N. McDonald is chief engineer. It is also reported that the Tennessee Central is surveying for a line from Crossville towards Latonia. W. N. McDonald is chief engineer.

New Orleans, La.—R. H. Downman, president of the Bowie, Lafourche & Northwestern and the Whitecastle & Lake Natchez railways, will, it is reported, build a new line from New Orleans to Beaumont, Texas, about 275 miles, the route being via Des Allemands, Bowie, Thibodaux and Beaumont. It is reported that work will begin immediately between Bowie and Thibodaux, 14 miles. Mr. Downman is also president of the Des Allemands Lumber Co., The Bowie Lumber Co., The Jeanerette Lumber Co., The Iberia Lumber Co. and the Whitecastle Lumber Co. The line will be standard gauge. J. R. Downman, 501 Hennepin Building, New Orleans, is chief engineer.

Norfolk, Va.—Mr. M. K. King, general manager, Norfolk & Southern Railroad, writes the Manufacturers' Record confirming the report that the company has purchased the Washington & Plymouth Railroad and intends extending from its present road at Mackey's Ferry to Plymouth, about eight miles. The extension is being built of standard gauge, and during the year the line from Plymouth to Washington, 36 miles, will be converted to standard gauge.

Portsmouth, Va.—Mr. W. W. Gwathmey, chief engineer Seaboard Air Line Railway, writes the Manufacturers' Record that he has no information concerning the press report that mining interests in Cabarrus County, North Carolina, propose to build a railroad to connect Concord with the Seaboard Air Line.

Richmond, Va.—Reported that the Virginia Passenger & Power Co., controlled by Frank J. Gould, of New York, contemplates an extension from Richmond via Fredericksburg to Washington, D. C., about 100 miles.

Riverside, Ala.—The Coosa Valley Railroad, which runs from Paradise Station to Gandy, is being extended from Gandy to Wolf Creek, two miles. F. H. Lathrop, of the Lathrop-Hatten Lumber Co., is president at Riverside.

San Antonio, Tex.—The San Antonio & Aransas Pass Railway is reported to have completed its extension to Lassiter, 50 miles from Alice.

Saratoga, Tex.—Mr. A. A. Wells will, it is reported, connect his tram road from the Santa Fe Railway at Saratoga to Batson with the line now building from Batson to Liberty, having agreed with the Batson Railroad Townsite Co. to do this.

Selma, Ala.—The Western Railway cut-off, connecting the Selma line with the Louisville & Nashville near Selma, seven miles, is completed.

St. Louis, Mo.—Mr. J. F. Hinckley, chief engineer of construction, Frisco System, writes the Manufacturers' Record that he has no information concerning the reported plan for the extension of the Ozark & Cherokee Central from Melvin, I. T., to Joplin, Mo.

St. Louis, Mo.—Reported that the St. Louis & San Francisco Railroad will build a new line from a point south of Monett, Mo., via Bentonville, Ark., to Van Buren, Ark., about 100 miles, in order to secure better grades. J. F. Hinckley is chief engineer of construction, 800 Fullerton Building.

St. Louis, Mo.—Mr. Russell Harding, vice-president and general manager of the Missouri Pacific Railroad, writes the Manufacturers' Record concerning the press report that the company would build to El Paso, Tex., and saying that he has no knowledge of any such intention.

St. Louis, Mo.—The Wabash Railroad will, it is reported, build a new freight terminal on property recently purchased, bounded by Carr, Franklin avenue, Third street and Collins street. W. S. Newhall is chief engineer.

Sanford, N. C.—It is reported that the intention of the Atlantic & Western Railroad Co. is to build its projected line from Sanford to Goldsboro, about 80 miles. Track has been laid between Sanford and Jonesboro, four miles, and there are about 50 miles under construction. W. J. Edwards is president.

Union, W. Va.—The County Court of Monroe county, W. Va., has appointed a commission to confer with engineers and railroad constructors to ascertain the probable cost of a railroad through Monroe county from some point on the Chesapeake & Ohio Railway (probably Ronayne, W. Va.) to some point on the Norfolk & Western Railway (probably Lurich, Va.). The relative cost of a steam and electric road will be inquired into. B. C. Young, Union, W. Va., should be addressed.

Union, W. Va.—Col. J. H. Crozier and others are reported interested in a plan to build a railroad to connect with the Chesapeake & Ohio and the Norfolk & Western.

Washington, D. C.—Reported that a branch will be built by the Southern Railway from Hiddenite, N. C., to Rock Face Mountain, where a granite quarry will be opened. W. H. Wells is engineer of construction.

STREET RAILWAYS.

Atlanta, Ga.—M. W. Thomas, of Atlanta, and C. J. Reed, of New Orleans, are reported interested in a plan to build an electric railway in Alexandria, La.

Centerville, Tenn.—W. N. Ratliff and others are reported interested in a plan for a cable car line, about two miles long, to haul phosphate.

Columbia, S. C.—The Street Railway Co. will, it is reported, build an extension to the State Fair grounds.

Dallas, Texas.—The Dallas Electric Railway Co. will, it is reported, build an extension. M. M. Phinney is manager.

Gainesville, Ga.—Reported that the Street Railway Co. may build an extension on Broad street.

Fort Worth, Texas.—The street railway in which Sam Rosen is interested will, it is stated, be incorporated by him, with I. Gordon and J. S. Gordon of Fort Worth, and H. A. Perlstein, of Beaumont. The company now has two and one-half miles of track from Rosen Heights and proposes to extend it to Fort Worth.

Knoxville, Tenn.—The Knoxville Traction Co. will, it is reported, extend all its important lines. C. H. Harvey is president.

Louisville, Ky.—The Louisville Railway Co. proposes to build a line from Johnson and Main streets to the city limits and a short distance beyond.

New Orleans, La.—Lyman C. Reed, of the Interstate Electrical Co., Limited, of New Orleans, and Maurice W. Thomas, of the Westinghouse Electric Co., Pittsburgh, Pa., are reported working on a plan to build a street railway at Alexandria, La.

New Orleans, La.—The New Orleans Railways Co. proposes to immediately begin extending the St. Charles Street Line.

Sheffield, Ala.—The Sheffield Co., which is building the electric railway between Tuscaloosa, Sheffield & Florence, will, it is stated, complete the work within two months.

Wheeling, W. Va.—The Wheeling Traction Co. is reported to have awarded contract for extending its line from Pasco to Barton, work to begin in the spring.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Advertising Supplies.—Savings Department, Drawer 278, Norfolk, Va., wants information and prices on advertising supplies, printed matter, etc., for savings-fund branches of the banking business.

Air Compressor.—D. L. Caxsey Machine Co., Springfield, O., wants air compressor with 8-inch cylinder, steam driven preferred.

Banking Equipment.—Otter & Poe, contractors, Lenoir, N. C., want prices on vault doors.

Bed Factory Equipment.—See Bed-spring Machinery.

Bed-spring Machinery.—Mebane Bedding Co., Mebane, N. C., wants machinery for manufacturing bed springs.

Belts.—Pine Belt Construction Co., Raleigh, N. C., wants prices on belts.

Bents.—L. P. Spangler, Lurich, Va., wants three small gasoline-power boats to carry from 1000 to 1500 pounds and run on river having six to eight-mile current; to draw 10 inches water; for passenger service.

Boats.—Tar Heel Steamboat Co., Elizabethtown, N. C., wants light draft stern-wheel steamboat.

Boilers.—John Davis, 81 Haverhill street, Boston, Mass., wants two horizontal tubular boilers, five or six feet diameter, for 100 pounds steam. Must re-insure.

Boiler Appliances.—See Steam Specialties.

Bottling Machinery.—Macon Ice, Bottling & Manufacturing Co. wants addresses of makers of bottling machinery.

Bottling Machinery.—Riverside Distilling Co., Ronda, N. C., wants bottling machinery; also whisky filter.

Brick Machinery.—Evergreen Fire Brick Co., Evergreen, Ala., wants crusher, pug mill and brick machine for daily output of 12,000 to 18,000 stiff mud bricks.

Bridges.—Proposals will be opened April 4 for construction of bridge of two spans, 70 feet each, and a bridge of 50-foot span. Bidders will submit plans and specifications (including concrete bulkheads) and separate proposals for each bridge. For

information address W. F. Sanders, County Supervisor, Beaufort, S. C.

Bridge.—Bids will be opened March 31st for erection of bridge across Chattahoochee river seven miles from Atlanta. All information necessary for bidders is given in full by plans and specifications, which can be seen at office of commissioner of roads and revenue, H. E. W. Palmer, Atlanta, Ga., or of ordinary of Cobb county, John Awtry, Marietta, Ga.

Bridge.—Bids will be opened February 20th for erection of steel bridge, 100 feet c. of end pins, with 16-foot roadway; capacity sufficient to carry 15-ton road roller. Each bidder is required to furnish plans and specifications complete, etc. Masonry will be built by township. Certified check for \$500 required. Address D. P. Hutchinson, chairman of committee, Charlotte, N. C.

Building Materials.—Otter & Poe, Lenoir, N. C., want prices on stone, slate, galvanized iron cornice, vault doors, wrought iron, terra cotta, metal castings, cements, lime, glass, tin, metal shingles, etc.

Building Materials.—W. H. Meyerlanders, Navasota, Tex., wants prices on building materials.

Building Materials.—Wild Bros., Evergreen, Ala., want building materials for 50x100-foot two-story brick store, including hand-power freight elevator.

Clock.—See Watchman's Clock.

Coffin Factory Machinery.—S. A. Neville, Meridian, Miss., wants machinery to equip coffin factory.

Cooperage.—Shand Builders' Supply Co., 615 Plain street, Columbia, S. C., wants to buy barrels knocked down.

Cooperage Machinery.—C. R. Speight, Charleston, S. C., wants equipment for manufacturing truck barrels and baskets; plant of 1000 daily; second-hand machinery will answer purpose. (C. R. Speight's address erroneously given last week as Eakles Mills, Md.)

Contractors' Equipment.—A. V. Kaiser & Co., 222 S. Third street, Philadelphia, Pa., wants several contractors' hoisting engines and wire rope.

Corn-meal Mill Machinery.—Horner Supply Co., Macon, N. C., wants to confer with manufacturers of corn-meal mill machinery relative to purchase of complete plant.

Cotton-yarn Machinery.—H. Schumacher Knitting Mills wants machinery for making cotton yarns.

Crematory.—Bids will be opened March 25th for furnishing materials and erecting garbage crematory for the city of Atlanta, Ga. Bidders must furnish plans and specifications. Specifications and plan of grounds will be furnished on application to committee. C. W. Strickler, C. W. Mangum and G. H. Brandon, committee, offices 1026 Empire Building.

Dessert Factory Equipment.—American Dessert Co., H. E. Cheif, president, 117 South street, Baltimore, Md., wants prices on machinery for manufacturing quick deserts.

Distilling Apparatus.—Pine Belt Construction Co., Raleigh, N. C., wants prices on boilers, engines, belts, steel reports, certain casting work, etc., for turpentine-apparatus works.

Electrical Equipment.—W. H. Meyerlanders, Navasota, Tex., wants prices on electrical supplies for \$6500 residence.

Electric Light Plant.—City of Belzoni, Miss., will open bids April 5th for construction of electric light plant and water works, according to plans and specifications now on file in office of Mayor S. Castleman. Appropriation is \$20,000. See Water Works.

Electrical Machinery.—Russell Woolen Mills, Morristown, Tenn., wants 50-light dynamo.

Electrical Machinery.—Southern Workmen Publishing Co., Columbus, Ga., wants prices on small motors for printing plant.

Electrical Machinery.—John Davis, 81 Haverhill street, Boston, Mass., wants 1000 to 2000-light volt dynamo, direct connected.

Elevator.—Wild Bros., Evergreen, Ala., want hand-power freight elevator.

Engine.—Asheville Milling Co., Asheville, N. C., wants Corliss engine, 16 by 42, left, second hand.

Engine.—John Davis, 81 Haverhill street, Boston, Mass., wants 12-inch slide valve, centre crank engine in good order but not over 250 H. P.; F. O. B. Boston.

Engine and Boiler.—See Tobacco Machinery.

Engines and Boilers.—Henderson, Murphree & Henderson, Huntsville, Ala., want prices on 60 horse-power water-box boiler

and 50 horse-power engine; 50 horse-power water-box boiler and 40 horse-power engine; three outfitts of either size; engine to be side crank, mounted on skids under boiler.

Engines and Boilers.—Pine Belt Construction Co., Raleigh, N. C., wants prices on engines and boilers. See Distilling Apparatus.

Engine and Boiler.—Wallace & Adcock, Hopkinsville, Ky., want prices on 60x16 boiler and 60 or 75 H. P. engine.

Farm Implements.—George B. McClelland, 805 E. Huron street, Ann Arbor, Mich., wants addresses of makers of stump machines.

Fire Extinguisher.—Central Mfg. Co., Roanoke, Va., wants fire extinguishers.

Food Produce Machinery.—See Dessert Factory Equipment.

Foundries.—Olof Ohlson, Bay View Hotel, Astoria, Oregon, wants to correspond with managers of foundries relative to manufacturing saw gauge.

Furniture.—See Theatre Equipment.

Furniture Factory Equipment.—W. T. P. Geiger, Glenville, Ga., wants prices on planers, scrapers, sanders, mortisers, tenoners, band resaws, etc.; also on finishing materials, such as mirrors and other glass goods.

Grits-Cassetts Mills, Gadsden, Ala., wants addresses of manufacturers of fine grades of grits.

Heating Plant.—S. W. Crummett, Monterey, Va., will contract for heating equipment for three-story hotel, 60x72 feet.

Heating Plant.—Jas. Knox Taylor, supervising architect, Washington, D. C., will open bids March 21st for low pressure steam heating apparatus, complete in place, in accordance with plans and specifications, copies of which may be had at above office or at office of superintendent at Joplin, Mo., where the plant is to be installed.

Hoisting Engine.—Laib Co., Louisville, Ky., wants two-ton hoisting engine, direct lift, in motion, to hoist two-ton car from mine.

Hoisting Engines.—See Contractors' Equipment.

Hoisting Equipment.—J. A. Street Co., Citizens' Bank Building, Norfolk, Va., wants hoisting engines with boilers, 12 by 14 inches cylinders; second-hand, in good condition, will answer purpose; send prices and specifications promptly.

Hosery Mill Equipment.—H. Schumacher Knitting Mills, Navasota, Tex., wants materials for making hosery and underwear, such as yarns, dyes, labels, pasteboard boxes, etc.; also machinery for making yarns.

Ice-Making Machinery.—Macon Ice, Bottling & Manufacturing Co., Macon, Miss., wants addresses of makers of ice-making machinery.

Ice Plant.—W. W. Almar & Co., Savannah, Ga., will buy equipment for manufacturing 25 to 30 tons of ice daily.

Iron Works Products.—Columbus Iron Works Co., Columbus, Ga., wants information relative to some product that can be made in an extensive iron-working establishment. The company already builds ice machines, cane mills, grate bars, general castings, etc., and wants to add some additional line that will keep its plant in full operation at all times. It has been considering the advisability of building oil-mill machinery.

Kaolin Users.—W. Wilford, Flatonia, Tex., wants to correspond with manufacturers needing crude kaolin.

Knitting Mill Equipment.—See Hosery Mill Equipment.

Lumbering Equipment.—See "Farm Implements."

Machin Tools.—T. G. Aultman Steam Pump Works, Fairmont, W. Va., wants 30 by 30-inch by 8-foot planer, 24-foot by 16-foot or 18-foot lathe, and 25 or 26-inch drill press.

Machin Tools.—Russell Woolen Mills, Morristown, Tenn., wants prices on turning lathe, eight or nine feet and on 36-inch shear.

Marine Power.—See Boats.

Mechanical Equipment, etc.—Bureau of Supplies & Accounts, Navy Department, Washington, D. C., will open bids March 1 for furnishing, at Norfolk, Charleston and Port Royal navy yards, a quantity of electric blowers, electric fans, traveling cranes, split pulleys, railroad track tools, foundry cupola, etc. Blank forms of proposal furnished on application to Navy Pay Offices at Norfolk, Va.; Charleston, S. C., and Port Royal, S. C.

Mining Equipment.—Buffalo Colliery Co., Chatteray, W. Va., wants iron and steel rails, mining cars and mining supplies generally.

Printing Equipment.—J. M. Clark, secretary, Kimball, W. Va., need type and paper for newspaper and job work.

Mining Equipment.—Morgantown Coal Co., Morgantown, W. Va., wants rope, incline plane drum, etc.

Printing Supplies.—Southern Workmen Publishing Co., Columbus, Ga., wants supplies for weekly newspaper printing plant.

Pumping Machinery.—Beeville Cottonseed Oil Mill Co., Beeville, Texas, wants high and low pressure hydraulic duplex pumps. See Steam Specialties.

Railway Construction.—Monroe County, W. Va., is to obtain estimates on probable cost of railway, both steam and electric to be considered. Address B. C. Young, Union, W. Va.

Railway Equipment.—A. V. Kaiser & Co., 222 S. Third street, Philadelphia, Pa., want 500 tons of 30-pound relayers with fish plates complete, also 80 tons of 25-pound relayers; and several contractors' hoisting engines and wire rope.

Railway Equipment.—See "Mining Equipment."

Refrigerating Materials.—Weathers & Hill, Columbus, Ga., want prices on all material used in construction of refrigerators.

Road Construction.—Bids are wanted for construction of road one mile long. About \$1500 to be expended. Address Board of Trade, Greenwood, Miss.

Road Machinery.—W. N. Luther or J. E. Walters, Jefferson, N. C., want proposals for road machinery.

Rolling Mill.—See Iron Rolling Machinery. **Sewer Work.**—Bids will be opened February 20th for furnishing materials and constructing about 5800 feet of pipe sewers at Pine Bluff, Ark., and proposals will be considered in office of Taylor & Jones. Plans and specifications are with Joel B. Whitem.

Sewer Construction.—Proposals will be opened March 8 for construction of sanitary sewers at Marshall, Texas; M. S. Rice, City Secretary, to open the bids. Forms of proposal, copy of specifications and instructions to bidders can be seen at city secretary's office or office of John W. Maxey, consulting engineer, Houston, Texas. A certified check for \$4000 will be required with each proposal. Write for full details.

Sewers.—Scaled bids will be received by the City Council of Augusta, Ga., until February 17th for furnishing all labor and material and constructing all pipe sewers which may be ordered by the city during year 1904. A certified check for \$100 to accompany each bid. Bond for \$1000 will be required. City reserves usual rights. Specifications and blank forms of proposal at office of Nisbet Wingfield, Commissioner of Public Works.

Shingle Machines.—Halzlip Lumber Co., Pinnacle, Ark., wants prices on shingle machines.

Steam Plant.—Horner Supply Co., Mansfield, N. C., wants to confer with builders of steam plants relative to purchase of an equipment for roller flour mill.

Steam Specialties.—Beeville Cottonseed Oil Mill Co., Beeville, Texas, wants 150 horse power feed water heater and lime extactor. See Pumping Machinery.

Telephone Equipment.—E. M. Crawford, Jasper, Ala., wants prices on plain galvanized and copper wire, telephone instruments, etc., for system.

Textile Machinery.—Pedro Miranda, 2a San Lorenzo, City of Mexico, wants information regarding machinery to manufacture bags and bagging from lechuguilla (rank marsh grass, with fibre similar to hemp).

Theatre Equipment.—E. G. Gilmer, Statesville, N. C., wants to buy chairs, scenery and drop curtain for small theatre.

Tobacco Machinery.—Bluegrass Tobacco Co., Lexington, Ky., wants plug tobacco machine-hydraulic pump finisher, boiler and engine. See Pumping Machinery.

Watchman's Clock.—Wilson Laundry Machinery Co., E. G. Smith, superintendent, Columbia, Pa., wants to buy electric clock with five stations.

Water Works.—City of Belzoni, Miss., will open bids April 5th for construction of water works and electric light plant according to plans and specifications now on file in office of Mayor S. Castleman. Appropriation is \$20,000. See Electric Light Plant.

Water Works.—City of Durant, I. T., will open bids March 2d for construction of

water works, for which \$80,000 is available. System to have about seven miles of distribution, power plant, pumping machinery, standpipes 25x120 feet, etc. W. L. Poole is mayor. Burns & McDonnell, Postal Telegraph Building, Kansas City, Mo., are the engineers in charge.

Well-drilling Machinery.—Glass & Son, Roswell, N. M., want to buy equipments for drilling artesian wells to a maximum depth of 1200 feet in soil usually requiring both rotary and drop machinery.

Wire-working Machinery.—See Bed-spring Machinery.

Well Drilling.—Young Men's Mutual Real Estate & Building Association, 2507 Commerce avenue, Houston, Tex., wants bids before March 1st for the development of gas and oil lands.

Woodworking Machinery.—See Coffin Factory Machinery.

Wood-working Machinery.—See Furniture Factory Equipment.

Woodworking Machinery.—See Shingle Machines.

MEXICO.

Asphalt Paving.—City of Vera Cruz, Mario Molina, mayor, contemplates awarding contracts for large quantity of asphalt street paving.

Coal Mining.—Carlos H. Johnson, San Marcial, Senora, will develop extensive coal fields, and will need considerable mining machinery.

Electric Light Plant.—City of Culiacan will receive proposals until March 31st for construction of electric light plant. Address Señor General Don Francisco Canedo, Culiacan, Sinaloa.

Electric Light Plant.—City of Campeche has decided to illuminate by electricity, and is now considering estimates. The plant must be completed by September next. For information address Señor Lic. Don Luis García M., Campeche City.

Hotel.—George E. King & Son, Torreon, have contract to build \$200,000 hotel in Torreon, and for building the new government palace in the city of Guadalajara.

Market House.—State Government of Guanajuato will build market house with all modern improvements for sanitary and marketing facilities. Address Señor Governor, Lic. Joaquin Obregon Gonzalez, Guanajuato.

Military Barracks.—The National Government will build modern military barracks with all the latest conveniences and sanitary equipment, and plans are now being prepared by the government architects. Structural iron and steel, piping and all the other necessary supplies will be needed in large quantities. Address General Mena, Secretary of War, City of Mexico.

Mining Equipment.—San Pedro Mining & Milling Co., Zitacaro, Michoacan, is in the market for mining machinery.

Mining Machinery.—George H. Richards, of Terre Haute, Ind., will install additional machinery in his mines in La Cruz.

Petroleum Properties.—General Francisco Marango and Hipolito Charles have formed a company to develop crude petroleum properties at Puerto Angel and Pochutla, Oaxaca.

Smelter.—Occidental Smelting & Refining Co. will build in the City of Chihuahua a smelter of 500 to 700 tons daily capacity, to be increased as needed to 1500 or 1700 tons.

Sugar Mill.—Buenavista Sugar & Plantation Co., Vera Cruz, will enlarge considerably its mills on the plantation. M. D. Campbell, mayor of Coldwater, Michigan, U. S. A., is president.

Telephone System.—The cities of Monterrey, Torreon, Saltillo, Durango and Tamayo will be connected by long-distance telephone line. Telephone instruments, wires, towers and the other necessary equipment will be needed. Address the Mayor of either Tampico or Monterrey.

Theatre.—The government will erect a public theatre and library in Atzcapotzalco. Address Ramon Corral, Ministro de Gobernacion, City of Mexico.

Water-power Plant.—Juan Otero Galvete, of Guanajuato, president of La Paz Mining & Smelting Co., will develop water power and utilize 100 litres of water per second to move the machinery of a large reduction plant.

Railways.

Steam Railroad.—The Valderrama Mining Co., Jimulco Station near Durango, intend building a 10-mile railroad to connect their immense smelting works with the Central Railway.

Steam Railroad.—The Xico & San Rafael Railroad has been transferred to the Mexican & Southwestern Railway Co. The narrow gauge will be changed to broad gauge as soon as practicable, and the line extended to the port of Coatzacoalcos on the Gulf. Ten million dollars has been pledged for the work, and it is rumored a St. Louis firm has already secured important contracts.

Steam Railroad Depot.—A prominent railroad official on a visit to Mexico from the United States is authority for the statement that the Texas Railroad Commission will pass upon the application of the El Paso Union Depot Co. for authority to issue bonds to the amount of \$250,000 for the erection of a new depot. Plans have been prepared, and it will be of handsome design, equipped with modern fittings and furniture, to make it one of the handsomest structures in the Southwest.

Steam Railroad.—It is reported that the Interoceanic Railroad which connects Mexico City with the port of Vera Cruz, will be changed within the next six months from narrow to broad gauge. Plans have been already submitted to the Board of Directors in London, according to the statement of an official of the company. Address R. Harrison Hodgson, president of the Interoceanic Railroad of Mexico, London, England.

Steam Railroad.—The Merida & Peten Railroad Co., of Yucatan, has been granted a concession to build a branch line from Hunabse, 58 kilometers from Merida to the city of Teabo. At least eight kilometers must be built within the first year and at least 10 kilometers in each of the

following years, so as to finish the whole line within six years from date of January 27, 1904. Address Rodolfo G. Canton, President of the Ferro Carriles de Merida a Peten, Merida, Yucatan.

Electric Railway.—B. R. Williams and associates, of Guanacevi, State of Durango, are taking preliminary steps for the construction of an electric railway connecting their extensive timber lands, 20 miles distant, with the city of Guanacevi.

Electric Railway.—The Mexican American Co., of 49 Wall street, New York City, has secured contract to build an electric road from Guadalajara City to Lake Chapala. Engineer Rudolph Weiser, now in Guadalajara, can give further information with regard to supplies and material wanted.

Street Railway.

Electric Railway.—For particulars regarding the change from animal to electric power traction which will be put into effect in the City of Mexico address C. G. Pierce, general superintendent of the Mexican Traction Co., City of Mexico. While the City of Mexico already possesses an up-to-date electric street-car system which covers the leading thoroughfares, the existing mule traction system is also extensive, penetrating every portion of the city, all of which will be abandoned and electric cars substituted.

Electric Railway.—For details concerning the new electric street-car system which will be introduced in the city of Vera Cruz write S. Pearson & Co.

Street Railway.—Douglas & Co., of Aguascalientes, are building an electric street-car system.

INDUSTRIAL NEWS OF INTEREST.

The Ruemmlle-Dawley Co.

One of the most important industries of the Southwest is the Ruemmlle-Dawley Mfg. Co., of St. Louis, Mo. This company has built up an extensive trade throughout the country, and the demand for its products increases every day. During the past year its facilities have been greatly improved, including the erection of a 150x500 foot building, containing the electric power plant, blacksmith shop, ice car shop, galvanizing shop and pattern shop, each being equipped with the most modern devices and labor-saving machinery. In the old plant has been placed the new boiler shop, equipped with hydraulic riveter, pneumatic riveters and calling tools, rolls, punches and shears for handling sheets and heavy steel plate, each machine being driven by an independent motor. This boiler department is designed for building Scotch marine boilers, internally fired and tubular, of any practicable size and capacity, and for heavy steel plate work of all kinds. The machine shop proper is equipped with a special design of boring machine for large compressors and engines, this machine having been furnished recently by the Meadville (Pa.) Vice Co. All the other departments are also equipped with the best modern machinery and devices for perfecting product and keeping the cost of production at a minimum figure. An important part of the Ruemmlle-Dawley Co.'s business is the manufacture of grates or water-cooling towers. These towers are constructed either of wood, steel or masonry. The company states that it is the original designer and owner of patents for water-cooling towers. Pipe work, fittings, valves, special equipment for ice and refrigerating plants, tanks, etc., are also specialties at the Ruemmlle-Dawley plant.

Edward Owen's New Connection.

Having ceased to be Commissioner of Accounts to the City of New York, after serving in the Bureau of Accounts through every administration since January, 1885, Edward Owen is now entirely out of public office. Mr. Owen announces that he has become associated with the Certified Audit Corporation of New York, offices at 170 Broadway, as its vice-president and general manager, and it is his intention to devote his entire time, as a certified public accountant and auditor, to furthering its interests. The corporation has a large staff of certified and expert accountants and auditors, and is, therefore, thoroughly equipped for making systematic audits and examinations of accounts of corporations, firms or individuals.

Moncrief Warm-Air Furnaces.

Having purchased the plant and assets of the Moncrief Furnace & Foundry Co., the Atlanta Furnace Co. announces that it will continue the manufacture of the Moncrief

Warm-Air Furnaces, making such changes as it knows will add to their many good qualities. The Atlanta Furnace Co. will continue its heating, ventilating and sanitary engineering and contracting business as formerly, and by having furnace and sanitary castings made in its own foundry, under the supervision of their designer, is better prepared than ever to meet the demands of the trade. The company's offices are at 79-81 N. Pryor street, Atlanta, Ga.

New England Cotton Mill.

One of the old New England cotton mill properties will be offered at public auction on February 25th. The property includes mill real estate, water power on the Blackstone river, hotel estate and the village property of the Farnumsville Cotton Mills at Farnumsville, Mass. The machinery includes two 72-inch 125 horse-power water wheels, two boilers, pair of engines of 80 horse-power each, condensers, pumps, etc.; also included in the main mill, four stories high, 42x206 feet, brick ell three stories high, 48x116 feet, etc., etc. Messrs. J. E. Conant & Co., auctioneers, have charge of the sale, and can be addressed for information at their offices in Lowell, Mass.

Norton Emery Wheel Representatives.

Among the well-known machinery houses destroyed by the recent fire at Baltimore was that of the Carey Machinery & Supply Co. on Light street. This company has already secured new offices and warerooms at 119 S. Fremont street and will continue business from there. The Norton Emery Wheel Co., of Worcester, Mass., which was represented by the Carey Co., has already begun shipping new supplies of emery wheels and other Norton products to Baltimore, so that the trade will be no further inconvenienced.

E. J. Codd Co.'s Plant Uninjured.

The many customers of the E. J. Codd Co., of Baltimore, will be glad to know that the company's plant was not injured in the fire of February 7th and 8th. At one time the plant was showered by sparks, but a specially organized fire corps met each igniter and quenched it. The Codd company has an extensive boiler and machine works and is prepared to serve former customers promptly as well as to engage on new contracts for buyers who want any kind of machine work done.

Sardis Electric Co. at Memphis.

The Sardis Electric Co., of Sardis, Miss., contractors for all kinds of electrical work, have opened an office in Memphis, Tenn., located at 224 Randolph Building. Firms and corporations prepared to award contracts are invited to obtain estimates from the company. The company's electrical repair-work will continue to be attended to

at the Sardis shops. Messrs. D. L. Rush, electrical engineer, and T. B. Trotter, steam and mechanical engineer, compose the Sardis Electric Co.

Baltimore City Directory Notice.

Individuals, firms and corporations whose offices and other business establishments were destroyed by the fire are advised to notify the Baltimore City Directory publishers as to their new address. The 1904 supplement will contain the new addresses. Messrs. R. L. Polk & Co., Benj. R. Sheriff, manager, publishers of the directory, have secured temporary accommodations at 726 N. Howard street, Maryland Telephone No. 7371 W.

Peters Ammunition In the South.

Announcement is made that the Gray & Dudley Hardware Co., of Nashville, Tenn., will handle Peters ammunition in future and be fully equipped to meet the growing demand in the Southern States. The company will act as general Southern distributor, carrying stocks at Nashville, Birmingham and Memphis. This will enable dealers in and users of this well-known modern ammunition to obtain supplies in any desired quantity and in large or small quantities.

The Fairbanks Co.

The Fairbanks Co.'s Baltimore offices announce that, although its stores at 19-21 Light street were involved in the conflagration last week, its stock at 314 North, where the offices have been established, was uninjured. Besides this stock the complete equipment of the New York and Philadelphia stores of Fairbanks are available for requisition from the Baltimore offices. The company is, therefore, in a position to solicit uninterrupted continuance of orders.

The Electrical Material Co.

Having escaped the recent fire which destroyed nearly the entire business section of Baltimore, the Electrical Material Co., of that city, calls attention to its facilities for supplying electrical materials of all kinds. The company had recently decided to double its stock in order to care for anticipated increased trade, and is now in a better position than ever to make immediate shipment. Offices at 221 N. Calvert street.

G. W. Lehmann & Son.

Messrs. G. H. Lehmann & Son announce that the total destruction of their laboratories at 32 South street by the fire of two weeks ago at Baltimore, will not interfere in the least with the execution of their work. They have located temporarily in the City Hall Annex, Holliday and Lexington streets, where all analyses entrusted to their care will have immediate attention.

Messrs. John Turnbull, Jr., & Co.

One of Baltimore's prominent firms whose extensive warehouses were involved in the fire two weeks ago was Messrs. John Turnbull, Jr., & Co., dealers in all kinds of furniture. They have secured new accommodations at 121 N. Howard street and say they are prepared to fill orders, having purchased a large stock from another Baltimore house which escaped the fire.

Nerst Lamp in Detroit.

In accordance with its policy of establishing district offices in the large cities, the Nerst Lamp Co., of Pittsburgh, has opened an office at 47 State street, Detroit, Mich. Charles F. Case is the district sales manager and will cover the territory embraced in the lower peninsula of Michigan, the northwestern part of Ohio and the northeastern part of Indiana.

Maryland Lime & Cement Co.

Main offices of the Maryland Lime & Cement Co., of Baltimore, are now at 1211-1213 S. Charles street, and orders for Lehigh, Portland cements, Portland and Rosendale cements, lime, fire bricks, sewer pipes, roofing felts, sheathing paper, etc., will have prompt attention and be shipped immediately after receipt of specifications.

Purchased Harmon-Whitmore Co.

Messrs. Sprout, Waldron & Co., of Muney, Pa., have purchased the patents, business, good-will, etc., of the Harmon-Whitmore Co., of Jackson, Mich., and will continue to manufacture the latter company's special line of flour mill machinery in conjunction with the well-known Sprout, Waldron & Co. products.

TRADE LITERATURE.

Diamond Expansion Bolt and Shield.

The New Jersey Foundry & Machine Co., of 9-15 Murray street, New York, is now distributing its catalogue No. 42 and circular descriptive of its Diamond expansion bolts. Hardware dealers, iron workers and others who need to be fully informed regarding improved supplies in their branches of activity will find interesting and valuable facts presented in the above company's circulars in reference to the Diamond expansion bolt and shield. The shield is now made to fit the regular stock lag screws made by the different manufacturers. The Diamond bolt has already made a reputation for itself, which is being augmented every day as users become better acquainted with its simplicity, its efficiency, its time-saving qualities and the various other merits it has.

New Northern Bulletins.

Nowhere in the industrial field is the progress of improvement so marked as in the construction of electrical apparatus. The experimental science of a decade ago is now an art to whose production man owes much of the economy of present industrial operations; much of the comfort of home life. Northern Electrical Apparatus is representative of this advance; designs and their execution are modern, handsome and efficient. New bulletins relative to Northern machinery are Nos. 29 and 30, the former devoted to multipolar motors and the latter to direct current generators. These two classes of electrical equipment as built by the Northern Electrical Manufacturing Co., of Madison, Wis., are described in the publications mentioned and their different applications for the improvement of operations in industrial plants is noted.

The 1904 Farquhar Catalogue.

This is the forty-eighth year the A. B. Farquhar machinery has been on the market, and during that time its strength, simplicity and durability have been unquestioned. The demand for Farquhar engines, boilers, saw mills, threshing machines, grain drills and other equipment steadily increases every year, and the company's plant is steadily being bettered and enlarged to meet the wants of buyers throughout the world. The A. B. Farquhar Co. is now issuing its 1904 catalogue, a publication replete with important facts and data concerning Farquhar machinery. For copies of catalogue address the main offices and plant at York, Pa.

Concerning Machine Tool Equipment.

The question of whether or not in machine shops power shall be distributed by means of electricity is to-day hardly considered, as the advantages obtained by this method are generally recognized. The subject, therefore, which is given attention is what method of electric distribution shall be adopted and in what manner shall be arranged the electric motors with respect to the work which they have to accomplish. A number of leaflets about this question have been issued by the Crocker-Wheeler Co., of Ampere, N. J., and a perusal of them will interest both machine tool users and electricians. Write the company for copies.

Reduced rates to Atlanta, Ga., are offered by the Pennsylvania Railroad on account of the meeting of the Department of Superintendence of the National Educational Association, on February 23rd to 25th. Round trip tickets will be sold February 20th to 22nd, inclusive, good to return to reach original starting point not later than February 27th. They will be sold at all stations on the Pennsylvania lines at special rates, and any further information may be obtained from ticket agents.

Five freight cars, containing more than 200 barrels of South Georgia cane syrup, were received last week by one grocery firm of Macon. The cane was raised upon 52 acres of land in Lowndes county.

It is reported that many bridge and iron workers from Pennsylvania iron districts are making their way to Birmingham, Ala.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

FINANCE AND THE FIRE.

Banks Conducting Business as Usual —Losses Relatively Small.

The Baltimore Stock Exchange has decided to postpone the resumption of business, which was interrupted by the fire, until next week, after the usual Washington's Birthday holiday. For several reasons it was deemed advisable to allow some time to elapse before resuming, not the least of which was the probability of a decided depression of values as a result of the conflagration. That there will be some depression is to be expected, although consideration of the facts shows that there is little warrant for anticipations of much loss. Take, for instance, the bank stocks. The institutions which these shares represent are in excellent condition, and those who have lost their buildings are insured. In the case of banks which had offices for rent in their structures there will, of course, be a temporary loss of rents from the same, but as the building loss is protected by the insurance, the loss of revenue in comparison therewith is apparently small, and with the rapid rebuilding which is already projected, this revenue will soon be restored, as the demand for offices is and will be extraordinarily great for some time.

All banks are now doing business as usual, those burned out having established temporary quarters in various parts of the city adjacent to the business section. None of them lost any of their moneys or other valuables by the conflagration, the vaults having stood the severe fire test to which they were subjected. The Clearing House has also resumed business, which makes the movement of trade and finance flow in its accustomed channels. There is a plentiful supply of money in the banks, and except for the wiping out of the stocks of thousands of business firms, everything is going on as usual.

The center of the financial district on South and German streets was annihilated by the flames, but very nearly, if not quite, all of the bankers and brokers have reopened offices and are prepared to conduct business as usual. There will, however, necessarily be delay in deliveries, on account of the fact that the large safe deposit vaults of the various trust companies inside the fire district cannot yet be reached by the box holders because of the necessary police regulations surrounding that area. By the time the Stock Exchange is ready to resume business these restrictions are expected to be sufficiently modified to permit of reaching securities in the vaults, which have all been found secure with their contents uninjured.

The confident and generally optimistic spirit which is manifested in the community gives rise to the expectation that the anticipated depression in the stock list will prove to be of very limited scope. There will, in consequence of the fire, be a general demand for money, and all of the financial institutions will doubtless be besieged with applications for loans upon collateral, of which the safe deposit vaults contain large amounts, and of

which much will be needed to provide for the rebuilding that is outlined.

Savings Bank of Baltimore.

The Savings Bank of Baltimore, the largest of all the Baltimore savings banks, lost its building by the great fire, but on opening its vaults found all its moneys, securities, books and other property therein absolutely without injury. This institution has deposits aggregating about \$25,000,000, represented by stocks and bonds of the best character, which were stored in its vaults and therefore escaped destruction, so that the only loss sustained by the bank was the edifice in which it made its home. Yet the ruin of this structure does not prevent the bank from continuing business as usual, and it has resumed operations in the new Courthouse, where space has been granted to it through the courtesy of the municipal authorities and of the Supreme Bench of Baltimore City. The prompt action which the bank took to assure its depositors that their savings were intact was highly commended, for many of them lost considerably by the fire and depended upon what they had accumulated in the bank to relieve their pressing needs. The principal officers of the institution are: Mr. William H. Conkling, president; Mr. Frederick A. Hoffman, treasurer.

A Sample of Baltimore Enterprise.

The Maryland Casualty Co. went ahead with its business almost as if there had not been any fire. Mr. John T. Stone, its president, writes the MANUFACTURERS' RECORD as follows:

"We have been so fortunate that the word 'resumption' is almost inapplicable. We saved all of our important records, and early on Monday morning leased the old-fashioned residence, 625 St. Paul street, which is very large and really has more floor space than our former area in the Equitable Building, although, of course, not so conveniently adapted to our purposes. Our records have all been rearranged, our clerks have not been away for any time at all, the different departments have been allotted their rooms in the new building, every room has been completely furnished, and our wheels were turning just as usual on Wednesday morning, hardly forty-eight hours after the fire. I cannot speak too highly of the magnificent work done by our officers and employés in overcoming the difficulties resulting from the fire."

New Corporations.

The Bay Spring Bank, of Bay Spring, Miss., capital \$50,000, has been incorporated by W. S. Pettus and others.

The Delta Bank and Trust Co., at Yazoo City, Miss., has been approved; capital, \$225,000.

The State National Bank of Texarkana, Ark., capital \$100,000, has been organized with E. K. Smith cashier.

W. T. Eldridge and others will, it is reported, organize a national bank with \$25,000 capital at Eagle Lake, Texas.

The Mutual Loan and Investment Association, of Savannah, Ga., has had its incorporation papers approved by the court.

The Bank of Rowland has been organized at Lumberton, N. C. President, James Allen Edens; vice-president, A. L. Bullock; cashier, W. F. Bristow.

The Merchants' & Planters' Bank of Tehula, Miss., capital \$50,000, has been approved. Ira Jones, R. E. Warfield and others are the incorporators.

The First National Bank of Apache, Okla., has been authorized to begin busi-

ness; capital, \$25,000. W. T. Clark, president; James M. Bohart, Jr., cashier.

The American National Bank of Enid, Okla., capital \$50,000, has been approved. The organizers are John Murphy, A. A. Murphy, L. N. Houston and John P. Cook.

Those interested in the new State bank proposed at Bessemer, Ala., are W. W. Hollingsworth, W. A. Porter, J. J. Sullivan, E. A. Little, W. T. Kennedy, Capital, \$50,000.

The Bank of Nettleton has been incorporated at Nettleton, Ark., capital \$10,000. The officers are: Ferdinand Kiech, president; J. E. Jones, vice-president; Henry Kiech, cashier.

The State Savings and Trust Co. of Texarkana, Ark., has been incorporated with \$100,000 capital. E. W. Frost is president, B. H. Kuhl vice-president, R. L. Dauby secretary, E. K. Smith treasurer.

The Montgomery County Bank, capital \$10,000, is reported in process of organization at Mt. Ida, Ark., with Dr. W. D. Jones, president; J. S. Nelson, vice-president, and Lucien Beavers, cashier.

The Clinton National Bank of Clinton, Mo., capital \$50,000, has been approved. The organizers are: Henry Kochler, 900 Walnut street, Kansas City, Mo.; J. L. Woolfolk, J. T. Marsh, W. M. Stevens and C. Lorth.

The People's National Bank of Lexington, Va., capital \$50,000, has been organized. Those interested are Wm. M. McElwee, Jr., J. W. McClung, G. W. Ottligher, E. A. Moore and B. H. Gorrell.

The Western National Bank of Fort Worth, Texas, capital \$250,000, has been approved. The organizers are W. H. Eddleman, Weatherford, Texas; Cicero Smith, George F. Levy, Harry W. Kute man and Wiley Blair.

The Rogers National Bank of Jefferson, Texas, capital \$25,000, has organized with the following officers: T. J. Rogers, president; B. F. Rogers, vice-president and cashier; J. D. Shackelford, assistant cashier.

The Lamar County Bank has been organized at Purvis, Miss., and will begin business about March 1st. The officers are: C. V. Hathorn, president; James O'Connell, vice-president; Vance R. McDonald, cashier.

The Walton Bank has amended its charter to remove from Pond Creek, Okla., to Nashville, Okla. The incorporators are J. H. Decker, A. Barkley, B. G. Palmer and J. W. Birk, of Pond Creek.

The First National Bank of Mansfield, La., has been approved, capital \$25,000. The organizers are: Boling Williams, Mansfield, La.; E. S. Woodfin, D. W. Saunders, W. W. Williams and M. J. Abington.

The First National Bank of Bridgeport, Texas, capital \$25,000, has been approved. The organizers are: H. G. Leonard, Bridgeport, Texas; P. C. Funk, N. P. Collier, Sam Hardy, Thomas J. Buckman and E. G. Leonard.

The Crittenden County Abstract Co. of Marion, Ark., has been incorporated with \$25,000 authorized capital and \$5000 subscribed. T. E. Hare, president; W. W. McCreary is vice-president, and R. Block, secretary and treasurer.

The People's National Bank of Fairmont, W. Va., has been approved; capital, \$200,000. The organizers are: W. S. Haymond, Fairmont, W. Va.; George M. Jacobs, C. E. Hutchinson, M. L. Hutchinson, Harry Shaw and others.

The American Loan & Improvement Co. of Jacksonville, Fla., capital \$50,000, has published its charter. The principal

officers are: President, Charles Blum; vice-president, W. G. Toomer; secretary, Philip Walter; treasurer, B. Richardson.

The People's National Bank of Gate City, Va., capital \$25,000, has organized by electing James B. Richmond, president; David C. Sloan, first vice-president; William C. R. Strong, second vice-president; Isaac G. Cox, third vice-president; John M. Johnson, Jr., cashier.

The Bay City Building Co., of Bay City, Matagorda county, Texas, has filed its charter to conduct a general building and loan business, capital \$8000. The incorporators are: N. D. Stewart, Dallas; Theo. Block, Galveston; O. M. Stone, Beaumont; T. A. Stone, F. M. Leake, Bay City.

The People's Bank of Holly Springs, Miss., publishes its charter. The incorporators are Geo. M. Buchanan, J. W. Stephenson, M. A. Montgomery, I. C. Levy, Eugene Crawford, R. Shumacker, R. E. Oliver, C. V. Beadles, L. A. Smith, R. G. McNamee, J. W. Robertson and Geo. W. Stephenson.

The Bank of Knobel is reported organized at Knobel, Ark., capital \$20,000. The officers are: Joseph Sellmeyer, president; R. Whitaker, vice-president; H. C. Sellmeyer, cashier. The Board of Directors include the first two named and C. V. Beloate, of Corning, Ark., and J. C. Baker, of Pearch Orchard, Ark.

The Citizens Bank of Hardin county has been incorporated at Savannah, Tenn.; capital, \$50,000. The incorporators are Edgar Cherry, J. K. Barlow, S. A. Welch, J. W. De Berry, F. C. Williams, C. A. Riss, G. W. Bingham, J. E. and G. A. Farris, C. V. Weller, J. E. De Ford and F. H. Winship.

The Bank of Norwood, capital \$15,000, has begun business at Norwood, La. The directors are: M. C. Bridges, president; Dr. A. Gayden, vice-president; J. C. Snyder, cashier, and Dr. L. G. Perkins, H. S. Perkins, W. A. West, Frank E. White, J. R. White and J. T. Sebastian. A bank with \$10,000 capital is reported organized at Cumberland City, Tenn., with Nixon Pickard as cashier.

The Alabama Loan and Investment Co., capital \$5000, which may be increased to \$50,000, has been organized. The officers are: Capt. A. W. Bell, president; A. J. Goodwin, vice-president; L. C. Watson, secretary; A. H. Quinn, treasurer, and W. H. Johnston, attorney. Directors: Capt. A. W. Bell, O. M. Reynolds, A. S. Ullman, L. C. Watson, A. J. Goodwin, W. F. Johnston, Jr., Dr. J. L. Wikle, Joseph Saks and A. H. Quinn.

The Dominion Fire Insurance Co. is reported organized at Tazewell, Va., capital \$100,000, surplus \$20,000. The charter members are: R. L. Bruce, W. H. Bond, M. L. Stallard, of Wise county; S. L. Aston and W. B. Gilmer, of Russell county, and K. D. R. Harman, M. L. Peery, W. L. Moore, R. A. Harman and F. D. Kitts, of Tazewell, and John M. Newton, of Pocahontas. Senator Bruce, it is reported, will be president and Mr. Kitts general manager.

The Bessemer State Bank has been organized at Bessemer, Ala., to begin business about March 1st, capital \$30,000, subscribed. The officers are: W. W. Hollingsworth, president; G. R. Lewis, first vice-president; W. H. Porter, second vice-president; E. A. Shelser, cashier. The directors are the first three officers and Messrs. A. A. Randle, Lee Moody, J. A. Estes, J. B. Edwards, M. U. Gwin, James Owen, J. J. Cotwell, W. J. Long, W. T. Kennedy, E. A. Little, T. A. Moore, J. J. Sullivan, Dr. W. G. Hurd, W. A. Simmons.

A new bank is being organized at Gatesville, N. C. Among the stockholders

ers are: James Parker, Joseph Dunn, Lycurgus Hodder, L. L. Smith, W. P. Roberts, E. R. Roberts, W. T. Cross, H. C. Williams, R. M. Riddick, T. A. Eure, J. W. Lilley, J. A. Eason, J. E. Lilley, E. F. Turner, J. P. Blanchard, A. P. Godwin, O. C. Turner, S. P. Cross, H. P. Winslow, J. E. Parker, Riddick Hodder, R. T. Savage, T. W. Lawrence, C. M. Lawrence, I. W. Crawford, Nathan Cullens, E. B. Spivey, W. F. Eason, H. A. Wolfley, J. S. Whedbee, F. H. Russell, R. E. Cochrane, J. W. Overman, Elbert Riddick, Sam Smith, Rufus Blanchard, George W. Roundtree, L. W. Parker, Mrs. Elizabeth Hunter Cross, T. W. Costen, Jr., J. J. Gatling.

New Securities.

Celina, Texas.—The city has voted to issue \$10,000 of school bonds.

Carizzo Springs, Texas.—The attorney-general has approved \$1900 of Dimmit county 3½ per cent. bridge repair bonds.

Bristol, Tenn.—The Board of Aldermen has voted to appropriate \$10,000 of bonds for a school in West Bristol.

Belton, Texas.—The city has sold \$5000 of bonds to the Commissioners Court of Brazos county, which purchased them for the School Fund.

Marshall, Texas.—The Texas Southern Railroad has been authorized to issue bonds to the amount of \$193,000.

Port Gibson, Miss.—Claiborne county will, it is reported, issue \$20,000 of 5 per cent. courthouse bonds.

Roby, Texas.—Fisher county has sold to the State Board of Education \$18,900 of bridge repair bonds.

Valdosta, Ga.—It is proposed to vote on the question of issuing \$35,000 of public school bonds.

Washington, Ga.—Wilkes county has sold \$32,000 of courthouse bonds to Kley bolte & Co., of Cincinnati.

Lincolnton, N. C.—The city has voted to issue \$30,000 of water works and sewer bonds. J. Thomas McLean is mayor.

Jackson, Miss.—The Senate has passed a bill allowing the Mississippi Levee Board to issue \$1,000,000 of bonds for improvements.

Jackson, Miss.—The Legislature has authorized the city of Jackson to issue \$250,000 of municipal improvement bonds.

Galveston, Texas.—The city has applied to the attorney-general for the approval of \$2,000,000 of grade redemption bonds.

Sherman, Texas.—The attorney-general has approved \$35,000 of 5 per cent. City of Sherman (Texas & Pacific Railroad) refunding bonds.

Ocilla, Ga.—The city has sold to C. M. Ellinwood & Co., of Chicago, \$15,000 of 30-year school and electric light bonds, at a premium of \$550.

Georgetown, S. C.—The city has sold to Weil, Roth & Co., of Cincinnati, Ohio, at a premium, \$75,000 of 5 per cent. water works and sewer bonds.

Memphis, Tenn.—The Memphis Telephone Co. proposes to issue \$1,000,000 of bonds to take up outstanding bonds and also to make improvements.

Mobile, Ala.—The city is receiving bids until February 18th, at noon, for \$404,000 of 5 per cent. paving bonds. Charles E. McLean is mayor and R. B. Owen, Jr., city clerk.

Nashville, Tenn.—The City Finance Committee has authorized the sale of the remaining municipal bonds, 3 per cent., as follows: \$50,000 for streets, \$100,000 for sewers. Bids to be opened February 23.

Cleveland, Ohio.—The Standard Development Co., 1201 Citizens' Bank Build-

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ing, announces that the West Virginia Smokeless Coal and Coke Co. will issue \$180,000 of 6 per cent. bonds. William H. Crafts, president; J. H. Lawson, secretary.

Big Stone Gap, Va.—The Watauga Water Co., of Johnson City, Tenn., will sell \$125,000 of its first mortgage 5 per cent. bonds. It exclusively supplies the city with water. The city has 6500 people, and the Mountain Branch of the National Home for Disabled Volunteer Soldiers, which is there, will, when completed, accommodate 3500 people, making the population 10,000. Gen. R. A. Ayers, treasurer of the water company, may be addressed at Big Stone Gap, Va.

The Atlantic National Bank of Jacksonville, Fla., reports at the close of business January 22, deposits, \$1,746,270; loans and discounts, \$1,065,233; cash and due from other banks, \$786,113; capital, \$350,000; surplus and undivided profits, \$31,802. The officers are Edward W. Lane, president; Fred W. Hoyt, vice-president; Thomas P. Denham, cashier.

MANUFACTURERS' RECORD.

The Consolidation Coal Co., the Fairmount Coal Co., the Somerset Coal Co., temporary general offices, sixth floor, Stafford Hotel, Chas. von H. Kalkmann, manager of sales, room 92 on the same floor.

John W. McPherson & Sons, men's furnishings and shirt makers, 42 West Lexington street.

A. Roszel Cathcart & Co., Insurance, temporary headquarters, 10 East Pleasant street.

James M. Thompson & Co., bankers and brokers, temporary offices, 606 North Charles street.

The Alpha Photo Engraving Co. (now at the Simpson & Doeller Co.), Milton avenue and Lanvale street.

Cumberland Coal Co., 21 West Saratoga street.

H. D. Dreyer & Co., temporary office, East Falls and Eastern avenues.

Maryland Lime & Cement Co., Charles H. Classen, proprietor, main office now at 1211-1213 South Charles street near West street.

International Mercantile Agency, 14 East Pleasant street.

Merchants National Bank, 300 Cathedral street.

American Type Founders Co., temporary location, 914 West Baltimore street.

Charles Hollander & Sons, chairs and furniture, and Hollander, Koskland & Co., manufacturing druggists, 109 South Gilmor street.

PROPOSALS.

TREASURY DEPARTMENT, Bureau of Engraving and Printing, Washington, D. C., February 1, 1904.—Sealed proposals will be received at this office until 2 P. M. on the dates below named to furnish during the fiscal year beginning July 1, 1904, the following classes of supplies, viz.: Monday, March 21, 1904, dry colors, rubber goods, engravers' supplies, textiles; Tuesday, March 22, 1904, hardware, oils, doctrine, grocers' sundries; Monday, April 11, 1904, paper, binders' supplies, plumbers' supplies, chemicals; Tuesday, April 12, 1904, electrical supplies, printers' inking rollers, strawboard boxes, lumber. Awards will be made only to established manufacturers or dealers in the articles. The right is reserved to reject any or all bids or parts of bids. Blank forms, with specifications for proposals and further information desired, will be furnished intending bidders upon application to WM. M. MEREDITH, Director of Bureau.

PROPOSALS will be received at the Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 12 o'clock noon, March 1, 1904, and publicly opened immediately thereafter, to furnish at the navy yards, Norfolk, Va., Charleston, S. C., and Port Royal, S. C., a quantity of electric blowers, electric fans, electric traveling crane, split pulleys, hardware, railroad track tools and materials, lamps, lanterns, lantern globes, drills, machinists' tools, shovels, leather belting, roofing felt, hammock hooks, lumber, fire brick, nickel steel, galvanized sheet steel, copper, zinc, hose, flax packing, kerosene, sperm oil, gasoline, petrolatum, resin, turpentine, tar, shellac, bath brick, pumice stone, brass pipe, pipe fittings, stationery, marine cement, oakum, lenses, cotton waste, wheelbarrows, target switch stands, push carts, and a foundry cupola. Blank proposals will be furnished upon application to the navy pay offices, Norfolk, Va., Charleston, S. C., and Port Royal, S. C. H. T. B. HARRIS, Paymaster-General U. S. N. 1-29-04

PROPOSALS will be received at the Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 12 o'clock noon, March 1, 1904, and publicly opened immediately thereafter, to furnish at the U. S. Naval Academy, Annapolis, Md., a quantity of furniture, lumber, Georgia or North Carolian pine piles, hardware, rope, broken stone, Portland cement, steel tanding blocks, and a rotary drum concrete mixer. Blank proposals will be furnished upon application to the Navy Pay Office, Baltimore, Md., and the Bureau of Supplies and Accounts, Navy Department, Washington, D. C. H. T. B. HARRIS, Paymaster-General, U. S. N.

PROPOSAL.

The Board of Mayor and Aldermen of the town of Belzoni, Miss., will receive sealed bids up to 6 o'clock P. M., Tuesday, April 5, 1904, to erect a water works and electric light plant for said town, to be constructed according to plans and specifications now on file in the office of the undersigned Mayor of the town.

The right is reserved to reject any and all bids.

Address,
S. CASTLEMAN, Mayor.

FOR SALE.—10,730 ACRES of virgin white pine, oak and poplar timber lands, cutting better than 30 per cent. of upper grades of lumber. Accessible to R. R. CORWITH BROS., Asheboro, North Carolina.

PROPOSALS

For Road Machinery wanted. Address
W. N. LUTHER or J. E. WALLACE,
Jefferson, N. C.

HICKORY WATER WORKS.

PROPOSALS for material, labor and machinery will be received by the Committee on Water Works, at Hickory, N. C., for the following until 12 o'clock noon, March 1, 1904:

About 50,000 lineal feet of coated cast-iron pipe, together with special castings for the lines. The pipes will range in size from 4" to 10" in diameter; for laying cast-iron pipes and appurtenances; for building sub-siding basins, sand filters, clear water basin, collecting well, etc.

Also for the following until 12 o'clock noon, March 2, 1904:

Two power pumps, and electric motors for driving same, capacity 325 gallons per minute each pump; two air lifts, each capable of raising 350 gallons per minute 100 feet high, together with two air compressors and electric motor for operating same; 80 hydrants and 60 gates for water mains; one stand pipe, 24 feet diameter, 100 feet high.

The city reserves the right to reject any or all bids. Plans and specifications may be seen on application to the committee at Hickory, N. C., or at office of the engineers in Providence, R. I. An engineer will be in Hickory about February 27, 1904, to give bidders information.

Committee on Water Works, Hickory, N. C.; W. P. Cline, J. W. Shuford, A. A. Shuford, J. D. Elliott.

O. Perry Sarle, Edward W. Shedd, Engineers, 146 Westminster St., Providence, R. I.

U. S. ENGINEER'S OFFICE, Jones Building, Detroit, Mich., January 18, 1904.—Sealed proposals for dredging under continuing contracts for improving Middle and West Neenah Channels, St. Marys River, Michigan, at Little Rapids and Nine-Mile Point, will be received here until 2 P. M. (Standard time), March 10, 1904, and then publicly opened. Information furnished on application. W. H. BIXBY, Major, Engineers.

NOTICE TO CONTRACTORS.

SEALED PROPOSALS will be received until 12 o'clock noon, on 17th day of March, 1904, for the erection of a new Court House for Grainger County, Tennessee. Plans and specifications will be on file after February 10, 1904, at the office of the County Judge at Rutledge, Tennessee, and at the office of Wheeler & Runge, architects, Charlotte, N. C.

Contractors must furnish with proposal a certified check for \$500, made payable to the County Judge of Grainger County, Tenn., to assure said county if his proposal is accepted, that he will furnish with his contract a surety bond of \$10,000, same to be satisfactory to the Building Commissioners, otherwise said check will be forfeited to Grainger County.

The job must be completed by November 1, 1904. The right is reserved to reject any or all proposals. Address, J. S. GILL or A. F. BRYAN, Rutledge, Tenn.

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Jonathan Lower, Columbiania, Ohio.

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The Watauga Water Company, supplying Johnson City, Tennessee, with water by gravity system, will sell \$125,000.00 First Mortgage Five Percent, Gold Bonds.

For particulars address

R. A. AYERS, Treasurer,
BIG STONE GAP, VIRGINIA.

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